STIC Search I

Lucas, Z
09/938406

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FILE 'REGISTRY' ENTERED AT 15:09:38 ON 14 NOV 2003
E LAUROYL/CN 5
E LAURIC ACID/CN 5
L1 1 S E3

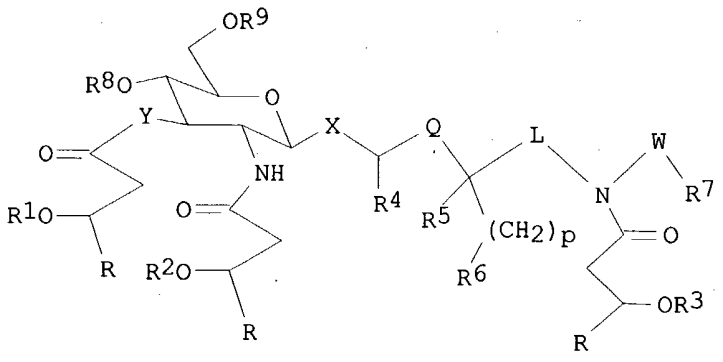
FILE 'HCAPLUS' ENTERED AT 15:10:34 ON 14 NOV 2003
L1 1 SEA FILE=REGISTRY ABB=ON PLU=ON "LAURIC ACID"/CN
L3 29344 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 OR LAUROYL OR LAURIC OR (C8(1W)(C18 OR 18))(S)(FATTY(W)(ACID OR ACYL))
L5 122 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 AND ANTIGEN
L6 43 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 AND (VACCIN? OR IMMUNIS? OR IMMUNIZ?)
L7 24 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 AND ANTIBOD?

L7 ANSWER 1 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:836578 HCAPLUS
DOCUMENT NUMBER: 139:307973
TITLE: Preparation of aminoalkyl glucosaminide phosphates and their use as adjuvants and immuno-effectors
INVENTOR(S): Johnson, David A.; Sowell, C. Gregory
PATENT ASSIGNEE(S): Corixa Corporation, USA
SOURCE: U.S. Pat. Appl. Publ., 62 pp., Cont.-in-part of U.S. Ser. No. 43,086.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 10
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003199460	A1	20031023	US 2002-137730	20020430
US 6113918	A	20000905	US 1997-853826	19970508
US 6303347	B1	20011016	US 1999-439839	19991112
US 2002048588	A1	20020425	US 2001-905160	20010712
US 2003092643	A1	20030515	US 2002-43086	20020108

PRIORITY APPLN. INFO.:
US 1997-853826 A2 19970508
US 1999-439839 A1 19991112
US 2001-905160 A2 20010712
US 2002-43086 A2 20020108

GI



I

Searcher : Shears 308-4994

AB Aminoalkyl glucosaminide phosphate compds. (AGP) I were prepared wherein, X is selected from the group consisting of O and S at the axial or equatorial position; Y is selected from the group consisting of O and NH; Q is (CH2)n; L is (CH2)m; W is (CH2)q; n, m, p, q are integers from 0 to 6; R is (CH2)10Me; R1-R3 are the same or different and are normal fatty acyl residues having from 1 to about 20 carbon atoms and where one of R1-R3 is optionally hydrogen; R4 and R5 are the same or different and are selected from the group consisting of H and methyl; R6 and R7 are the same or different and are selected from the group consisting of H, hydroxy, alkoxy, phosphono, phosphono-oxy, sulfo, sulfo-oxy, amino, mercapto, cyano, nitro, formyl and carboxy, and esters and amides thereof; and R8 and R9 are the same or different and are selected from the group consisting of phosphono and H, and at least one of R8 and R9 is phosphono, that are adjuvants and immuno-effectors are described and claimed. The compds. have a 2-deoxy-2-amino glucose in glycosidic linkage with an aminoalkyl (aglycon) group. Compds. are phosphorylated at the 4 or 6 carbon on the glucosaminide ring and comprise three 3-alkanoyloxyalkanoyl residues. The compds. augment **antibody** production in **immunized** animals as well as stimulate cytokine production and activate macrophages. Methods for using the compds. as adjuvants and immuno-effectors are also disclosed. Thus, N-[(R)-3-hydroxytetradecanoyl]-O-[2-deoxy-4-O-phosphono-2-[(R)-3-dodecanoyloxytetradecanoylamino]-3-O-[(R)-3-tetradecanoyloxytetradecanoyl]-α-L-D-glucopyranosyl]-L-serine triethylammonium salt was prepared and tested in mice as adjuvants and immuno-effectors. Mice **vaccinated** with formalin-inactivated influenza and the AGP compds. of the subject invention mounted a protective immune response to an influenza challenge as well as produced **antibody** to that **antigen**.

L7 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2003:376382 HCAPLUS
DOCUMENT NUMBER: 138:384134
TITLE: **Vaccine** compositions comprising aminoalkyl glucosaminide phosphate compounds as adjuvants and immunoeffectors for treating cancerous and infectious diseases
INVENTOR(S): Johnson, David A.; Sowell, C. Gregory
PATENT ASSIGNEE(S): Corixa Corporation, USA
SOURCE: U.S. Pat. Appl. Publ., 60 pp., Cont.-in-part of U.S. Ser. No. 905,160.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 10
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003092643	A1	20030515	US 2002-43086	20020108
US 6113918	A	20000905	US 1997-853826	19970508
US 6303347	B1	20011016	US 1999-439839	19991112
US 2002048588	A1	20020425	US 2001-905160	20010712
US 2003199460	A1	20031023	US 2002-137730	20020430

PRIORITY APPLN. INFO.: US 1997-853826 A2 19970508
US 1999-439839 A1 19991112
US 2001-905160 A2 20010712
US 2002-43086 A2 20020108

OTHER SOURCE(S): MARPAT 138:384134

AB Aminoalkyl glucosaminide phosphate (AGP) compds. that are adjuvants and immunoeffectors are described and claimed. The compds. have a 2-deoxy-2-amino glucose in glycosidic linkage with an aminoalkyl (aglycon) group. Compds. are phosphorylated at the 4 or 6 carbon on the glucosaminide ring and comprise three 3- alkanoyloxyalkanoyl residues. The compds. augment **antibody** production in **immunized** animals as well as stimulate cytokine production and activate macrophages. Compns. and methods for using the compds. as adjuvants and immunoeffectors are also disclosed.

L7 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 2002:973007 HCAPLUS

DOCUMENT NUMBER: 138:151846

TITLE: Isolation of immunogenic outer membrane proteins from Mannheimia haemolytica serotype 1 by use of selective extraction and immunoaffinity chromatography

AUTHOR(S): McVicker, Jerry K.; Tabatabai, Louisa B.

CORPORATE SOURCE: Department of Veterinary Microbiology and Preventive Medicine, College of Veterinary Medicine, Ames, IA, 50011, USA

SOURCE: American Journal of Veterinary Research (2002), 63(12), 1634-1640
CODEN: AJVRAH; ISSN: 0002-9645

PUBLISHER: American Veterinary Medical Association

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Objective-To use **antibodies** produced by calves in response to infection with Mannheimia haemolytica in immunoaffinity chromatog. for the identification and subsequent isolation of the dominant immunogenic **antigens** from bacteria grown in iron-deficient media. Sample Population-Serum from 10 calves actively infected with M. haemolytica. Procedure-An outer membrane protein fraction was obtained from sonicated salt-extracted M. haemolytica cells by extraction with N-**lauroyl** sarcosinate. The Ig fraction of serum from calves actively infected with M. haemolytica was used to prepare an immunoaffinity column. The immunoaffinity column was used to isolate the dominant immunogenic proteins from the-outer membrane protein fraction. The resultant immunogenic protein fraction was subjected to ELISA and immunoblot methods as well as carbohydrate quantification. Sequencing of the N-terminal was performed on the most prominent protein. Results-5 immunogenic proteins with mol. wts. of 42, 30, 24, 20, and 15 kd were isolated. The immunogenic protein fraction was found to contain 51 % carbohydrate. The immunoaffinity column capacity was 1 μg of immunogenic protein/mL of gel. The N-terminal sequence of the 42-kd protein was Tyr-Gln-Thr-Tyr-Gln-Ser-X-Leu-Gln, where X could not be identified. Conclusions and Clin. Relevance-Immunogenic proteins were isolated by use of immunoaffinity chromatog. A substantial amount of carbohydrates was co-purified in the process. Addnl. expts. are needed to determine whether the carbohydrates would hinder or enhance development of **vaccine** prepns. This method could potentially allow a more rapid production of

antigens for use in **vaccines**.
REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:754233 HCAPLUS
DOCUMENT NUMBER: 137:277777
TITLE: **Vaccines** comprising monolipopeptides or dilipopeptides for modulating cellular and humoral immune responses
INVENTOR(S): Budzynski, Wladyslaw A.; Koganty, Rao R.; Krantz, Mark J.; Longenecker, Michael B.
PATENT ASSIGNEE(S): Biomira, Inc., Can.
SOURCE: PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002076485	A2	20021003	WO 2002-IB2188	20020327
WO 2002076485	A3	20030530		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003157160	A1	20030821	US 2002-106876	20020327

PRIORITY APPLN. INFO.: US 2001-278698P P 20010327

AB The present invention provides liposomal **vaccines** containing immunogenic lipopeptides that are capable of modulating the humoral and cellular immune responses in in vivo. The **vaccines** comprise antigenic peptides derived from **antigens** or proteins associated with disease selected from tuberculosis, hepatitis B, malaria and cancer.

IT **143-07-7D, Lauric** acid, peptide conjugates
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tuberculosis, hepatitis B, malaria and cancer **vaccines** comprising monolipopeptides or dilipopeptides for modulating cellular and humoral immune responses)

L7 ANSWER 5 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:903792 HCAPLUS
DOCUMENT NUMBER: 136:42838
TITLE: Delivery systems for a peptide, protein or nucleic acid
INVENTOR(S): Barman, Shikha P.; McKeever, Una; Hedley, Mary Lynne

PATENT ASSIGNEE(S): Zycos Inc., USA
SOURCE: PCT Int. Appl., 100 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001093835	A1	20011213	WO 2001-US17971	20010601
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1292285	A1	20030319	EP 2001-946064	20010601
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: US 2000-208830P P 20000602
WO 2001-US17971 W 20010601

AB The invention features a microparticle composition for the delivery of bioactive agents into cells that includes a polymeric matrix, an anionic or zwitterionic lipid having a pKa of < .apprx. 2.5, and a bioactive agent, e.g. a peptide, protein, or nucleic acid. The compns. of the invention can be used to deliver bioactive compds., such as nucleic acids encoding immunostimulatory peptides and/or therapeutic proteins. For example, poly(glycolic acid-lactic acid) microparticles containing DNA encoding a peptide having an amino acid sequence of proteolipid protein (PLP) were prepared and injected i.v. to a multiple sclerosis patient whose T cells secrete excess Th1 cytokines (i.e., IL-2 and γ-IFN). Expression of PLP-like peptide by APCs results in the switching of the cytokine profile of the T cells, such that they instead produce Th2 cytokines (i.e., IL-4 and IL-10) in response to autoantigens. Also, DNA encapsulated in PEG-DSPE containing microparticles was protected from the nuclease, compared to DNA in non-lipid containing microparticles.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 6 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:757768 HCAPLUS
DOCUMENT NUMBER: 135:302901
TITLE: Aminoalkyl glucosaminide phosphate compounds and their use as adjuvants and immunoeffectors
INVENTOR(S): Johnson, David A.; Sowell, C. Gregory
PATENT ASSIGNEE(S): Corixa Corporation, USA
SOURCE: U.S., 44 pp., Cont.-in-part of U.S. 6,113,918.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 10
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6303347	B1	20011016	US 1999-439839	19991112
US 6113918	A	20000905	US 1997-853826	19970508
WO 2001034617	A2	20010517	WO 2000-US31340	20001113
WO 2001034617	A3	20011108		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1230250	A2	20020814	EP 2000-982119	20001113
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2000015501	A	20030225	BR 2000-15501	20001113
JP 2003514783	T2	20030422	JP 2001-537329	20001113
US 2002045586	A1	20020418	US 2001-808669	20010314
US 2002048588	A1	20020425	US 2001-905160	20010712
AU 2001019189	A5	20010606	AU 2001-19189	20011113
US 2003092643	A1	20030515	US 2002-43086	20020108
US 2003199460	A1	20031023	US 2002-137730	20020430
NO 2002002207	A	20020710	NO 2002-2207	20020508

PRIORITY APPLN. INFO.:

US 1997-853826	A2	19970508
US 1991-815250	A	19911231
US 1998-138305	A1	19980821
US 1999-429238	A	19991028
US 1999-439839	A	19991112
US 2000-190444P	P	20000317
WO 2000-US31340	W	20001113
US 2001-905160	A2	20010712
US 2002-43086	A2	20020108

OTHER SOURCE(S): MARPAT 135:302901

AB Aminoalkyl glucosaminide phosphate (AGP) compds. that are adjuvants and immunoeffectors are described and claimed. The compds. have a 2-deoxy-2-amino glucose in glycosidic linkage with an aminoalkyl (aglycon) group. Compds. are phosphorylated at the 4 or 6 carbon on the glucosaminide ring and comprise three 3-alkanoyloxyalkanoyl residues. The compds. augment **antibody** production in **immunized** animals as well as stimulate cytokine production and activate macrophages. Methods for using the compds. as adjuvants and immunoeffectors are also disclosed.

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 7 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:489256 HCAPLUS
DOCUMENT NUMBER: 135:91522
TITLE: Micelle-forming lipopeptides targeted at

antigen presenting cells useful as **vaccine** adjuvants
INVENTOR(S): Zuckerman, Jane Nicola; Ramesh, Bala Subramaniyam
PATENT ASSIGNEE(S): University College London, UK
SOURCE: PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001047553	A1	20010705	WO 2000-GB4937	20001221

W: JP, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR

PRIORITY APPLN. INFO.: GB 1999-30591 A 19991223

AB A component for an adjuvant, which is capable of micelle formation and comprises a peptide head group for binding to an **antigen** -presenting cell, and a lipophilic tail group. The examples discuss the synthesis of a hepatitis B virus surface **antigen** peptide and an integrin-targeted lipopeptide as adjuvant and the **antibody** response to this **vaccine**.

IT **143-07-7**, **Lauric** acid, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(peptide conjugates; micelle-forming lipopeptides targeted at **antigen** presenting cells useful as **vaccine** adjuvants)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 8 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:489253 HCAPLUS
DOCUMENT NUMBER: 135:91520
TITLE: Polymerizable lipopeptide immunogens for **vaccination**
INVENTOR(S): Zuckerman, Jane Nicola; Ramesh, Bala Subramaniyam
PATENT ASSIGNEE(S): University College London, UK
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001047549	A2	20010705	WO 2000-GB4951	20001221
WO 2001047549	A3	20011227		

W: JP, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR

PRIORITY APPLN. INFO.: GB 1999-30585 A 19991223

AB The authors disclose the preparation and biol. activity of polymerizable immunogens for **vaccination**. A polymerizable immunogen comprises an antigenic peptide covalently linked to a hydrocarbon spacer, a cysteine residue, and an acryloyl functional group. The acryloyl functional group may provide for endogenous polymerization within **antigen**-presenting cells via free radical mechanisms. In addition, the authors disclose the preparation of a lipophilic synthetic adjuvant targeted to RGD-binding integrins. In one example, an **antibody** response in mice was elicited with a micellar preparation of the adjuvant and an immunogen containing a peptide derived from the surface **antigen** of hepatitis B virus.

IT **143-07-7, Lauric** acid, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(conjugation with RGD motif peptide)

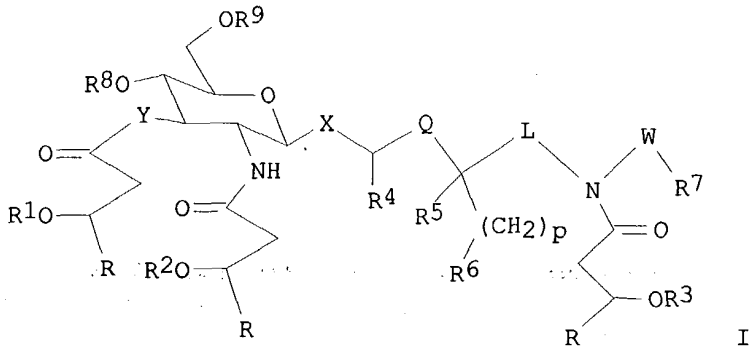
L7 ANSWER 9 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:360008 HCAPLUS
DOCUMENT NUMBER: 134:353474
TITLE: Preparation of aminoalkyl glucosaminide phosphates and their use as adjuvants and immuno-effectors
INVENTOR(S): Johnson, David A.; Sowell, C. Gregory
PATENT ASSIGNEE(S): Corixa Corporation, USA
SOURCE: PCT Int. Appl., 147 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 10
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001034617	A2	20010517	WO 2000-US31340	20001113
WO 2001034617	A3	20011108		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6303347	B1	20011016	US 1999-439839	19991112
EP 1230250	A2	20020814	EP 2000-982119	20001113
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2000015501	A	20030225	BR 2000-15501	20001113
JP 2003514783	T2	20030422	JP 2001-537329	20001113
AU 2001019189	A5	20010606	AU 2001-19189	20011113
NO 2002002207	A	20020710	NO 2002-2207	20020508

PRIORITY APPLN. INFO.: US 1999-439839 A 19991112
US 1997-853826 A2 19970508
WO 2000-US31340 W 20001113

OTHER SOURCE(S): MARPAT 134:353474

GI



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AB Aminoalkyl glucosaminide phosphate compds. (AGP) I were prepared wherein, X is selected from the group consisting of O and S at the axial or equitorial position; Y is selected from the group consisting of O and NH; Q is (CH2)n; L is (CH2)m; W is (CH2)q; n, m, p, q are integers from 0 to 6; R is (CH2)10Me; R1-R3 are the same or different and are normal fatty acyl residues having from 1 to about 20 carbon atoms and where one of R1-R3 is optionally hydrogen; R4 and R5 are the same or different and are selected from the group consisting of H and methyl; R6 and R7 are the same or different and are selected from the group consisting of H, hydroxy, alkoxy, phosphono, phosphonooxy, sulfo, sulfooxy, amino, mercapto, cyano, nitro, formyl and carboxy, and esters and amides thereof; and R8 and R9 are the same or different and are selected from the group consisting of phosphono and H, and at least one of R8 and R9 is phosphono, that are adjuvants and immuno-effectors are described and claimed. The compds. have a 2-deoxy-2-amino glucose in glycosidic linkage with an aminoalkyl (aglycon) group. Compds. are phosphorylated at the 4 or 6 carbon on the glucosaminide ring and comprise three 3-alkanoyloxyalkanoyl residues. The compds. augment **antibody** production in **immunized** animals as well as stimulate cytokine production and activate macrophages. Methods for using the compds. as adjuvants and immuno-effectors are also disclosed. Thus, N-[(R)-3-hydroxytetradecanoyl]-O-[2-deoxy-4-O-phosphono-2-[(R)-3-dodecanoyloxytetradecanoylamino]-3-O-[(R)-3-tetradecanoyloxytetradecanoyl]-α-L-D-glucopyranosyl]-L-serine triethylammonium salt was prepared and tested in mice as adjuvants and immuno-effectors. Mice **vaccinated** with formalin-inactivated influenza and the AGP compds. of the subject invention mounted a protective immune response to an influenza challenge as well as produced **antibody** to that **antigen.**

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 10 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:729202 HCAPLUS

DOCUMENT NUMBER: 130:100736
TITLE: Quantitative analysis of a synthetic adjuvant by an immunoassay
AUTHOR(S): Hilgers, L. A. Th.; Fochesato, M.; Nicolas, I.; Lejeune, G.; Boon, B.
CORPORATE SOURCE: Applied Immunology, Solvay Research and Technology, Brussels, 310, Belg.
SOURCE: Journal of Immunological Methods (1998), 218(1-2), 105-116
CODEN: JIMMBG; ISSN: 0022-1759
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB **Antibodies** against a sulfolipo-derivative of synthetic polysucrose (SL-Ficoll) were prepared with the purpose of developing a detection system for this adjuvant component. SL-Ficolls with polysucrose backbones of 400 kDa (SL-Ficoll400) or 22 kDa (SL-Ficoll22) were not immunogenic. However, SL-Ficoll22 conjugated to bovine serum albumin (SL-Ficoll22- BSA) induced high levels of specific **antibodies** against SL-Ficoll in mice as determined by an indirect ELISA with either SL-Ficoll400 or SL-Ficoll22 as coating **antigen**. The specificity of the **antibodies** was analyzed further in a blocking ELISA with SL-Ficoll400 as coat. Dose-dependent inhibition of the ELISA titer was obtained with SL-Ficoll22 and SL-Ficoll400 and the concentration causing 50% inhibition (IC50) was <1 μg/mL. Non-derivatized polysucrose (Ficoll400) and compds. lacking either lipid or sulfate were not recognized (IC50 > 1000 μg/mL). The reaction of SL-Ficoll400 derivs. with **antibodies** increased with increasing sulfate and lipid content and maximal inhibition was produced by compds. with a composition similar to the SL-Ficoll22 used for **immunization**. Quant. anal. of SL-Ficoll400 in adjuvant formulations comprising SL-Ficoll400 incorporated in a squalane-in-water emulsion revealed high recovery and sufficient precision. From these data, we conclude that specific **antibodies** are generated against the synthetic SL-Ficoll400 and that this component of a novel adjuvant formulation can be quantified by an immunoassay.

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 11 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:575365 HCAPLUS
DOCUMENT NUMBER: 129:301384
TITLE: Influence of immunoadjuvants and a promiscuous T-cell determinant on the immunogenicity of RESA peptide **antigen** of P. falciparum
AUTHOR(S): Chaba, B.; Kumar, P.; Haq, W.; Sabhnani, L.; Rao, D. N.
CORPORATE SOURCE: Department of Biochemistry, All India Institute of Medical Sciences, New Delhi, 110 029, India
SOURCE: International Journal of Immunopharmacology (1998), 20(6), 259-273
CODEN: IJIMDS; ISSN: 0192-0561
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Synthetic peptide **antigens** representing the repeat

sequences of malarial **antigens** showed poor immunogenicity and protection in clin. trials. In the present study, RESA, an asexual blood stage **antigen**, containing (EENVEHDA)2 and (DDEHVEEPTVA)2 sequences were chemical linked to a promiscuous T-cell determinant (CS.T3) of the circumsporozoite protein of P. falciparum. The synthetic constructs either alone or coentrapped with immunoadjuvants (nor muramyl dipeptide/**lauroyl** tetrapeptide) were administered in liposomes to mice of varying genetic background and the immunogenicity of different formulations were compared under identical exptl. conditions. The RESA peptide formulations containing the T-cell determinant and the adjuvants generated high titer and affinity **antibodies** in all the strains, as compared to peptide(s) alone. The booster **immunization** induced a strong anamnestic response in each group. Though the major IgG isotype is of IgG1 and IgG2b interestingly, formulations containing CS.T3 have a higher proportion of cytophilic IgG2b isotype. There was a significant fall in the levels of IgG2b isotype while IgG1 levels were maintained same in the third bleed (day 60, without booster **immunization**). The mixed peptide group preparation containing the adjuvant is found to be a better immunogen than that of resp. peptides itself. The in vitro merozoite reinvasion inhibition assay showed 76-96% inhibition with the formulations containing RESA peptide(s)-CS.T3 and the adjuvant, while with peptides alone the inhibition was 50-56%. This study highlights the importance of an alternative approach for developing peptide based immunogen against malaria.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 12 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1998:205112 HCAPLUS

DOCUMENT NUMBER: 129:24780

TITLE: Identification of a novel heptoglycan of α1→2-linked D-glycero-D-manno-heptopyranose. Chemical and antigenic structure of lipopolysaccharides from Klebsiella pneumoniae ssp. pneumoniae rough strain R20 (O1-:K20-)

AUTHOR(S): Susskind, Miriam; Brade, Lore; Brade, Helmut; Holst, Otto

CORPORATE SOURCE: Division of Medical and Biochemical Microbiology, Research Center Borstel, Borstel, D-23845, Germany

SOURCE: Journal of Biological Chemistry (1998), 273(12), 7006-7017
CODEN: JBCHA3; ISSN: 0021-9258

PUBLISHER: American Society for Biochemistry and Molecular Biology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In a preliminary investigation (Susskind, M., Muller-Loennies, S., Nimmich, W., Brade, H., and Holst, O. (1995) Carbohydr. Res. 269, C1-C7), we identified after deacylation of lipopolysaccharides (LPS) from Klebsiella pneumoniae ssp. pneumoniae rough strain R20 (O1-:K20-) an oligosaccharide as a major fraction. We now report the complete structure of lipopolysaccharide, which was elucidated by addnl. characterization of isolated core oligosaccharides and

anal. of the lipid A. The substituent at O-4 of the second GalpA is D-GlcpN, which in a fraction of the LPS is substituted at O-6 by three or four residues of D-glycero-D-manno-heptopyranose (D,D-Hepp). The complete carbohydrate backbone of the LPS is given. The structure is unique with regard to the presence of an α1→2-linked D-glycero-D-manno-heptoglycan (oligosaccharide), which has not been described to date, and does not contain phosphate substituents in the core region. Fatty acid anal. of lipid A identified (R)-3-hydroxytetradecanoic acid as sole amide-linked fatty acid and (R)-3-hydroxytetradecanoic acid, tetradecanoic acid, small amts. of 2-hydroxytetradecanoic acid, hexadecanoic acid, and traces of dodecanoic acid as ester-linked fatty acids, substituting the carbohydrate backbone D-GlcpN4Pβ1→6D-GlcpNα1P. The nonreducing GlcN carries four fatty acids, present as two 3-O-tetradecanoyltetradecanoic acid residues, one of which is amide-linked and the other ester-linked to O-3'. The reducing GlcN is substituted in a nature fraction of lipid A by two residues of (R)-3-hydroxytetradecanoic acid, one in amide and the other in ester linkage at O-3. Two minor fractions of lipid A were identified; in one, the amide-linked (R)-3-hydroxytetradecanoic acid at the reducing GlcN is esterified with hexadecanoic acid, resulting in 3-O-hexadecanoyltetradecanoic acid, and in the second, one of the 3-O-tetradecanoyltetradecanoic acid residues at the nonreducing GlcN is replaced by 3-O-dodecanoyltetradecanoic acid. After **immunization** of BALB/c mice, two monoclonal **antibodies** were obtained that were shown to be specific for the core of LPS from K. pneumoniae ssp. pneumoniae, since they did not react with LPS or whole-cell lysates of a variety of other Gram-neg. species. Both monoclonal **antibodies** could be inhibited by LPS but not by isolated oligosaccharides and are thus considered to recognize a conformational epitope in the core region.

IT **143-07-7**, Dodecanoic acid, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(of lipid A; chemical and antigenic structure of lipopolysaccharides from Klebsiella pneumoniae ssp. pneumoniae rough strain R20 (O1-:K20-))

REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 13 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:65996 HCAPLUS
DOCUMENT NUMBER: 128:139751
TITLE: Stabilization of protein and peptide **antigens** in **vaccines** for induction of mucosal immunity
INVENTOR(S): Lowell, George H.; Vancott, Thomas C.; Birx, Deborah L.
PATENT ASSIGNEE(S): Intellivax, Inc., USA; Henry M. Jackson Foundation; United States Dept. of the Army; Lowell, George H.; Vancott, Thomas C.; Birx, Deborah L.
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9801558	A2	19980115	WO 1997-US12253	19970710
WO 9801558	A3	19980514		
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2259961	AA	19980115	CA 1997-2259961	19970710
AU 9736629	A1	19980202	AU 1997-36629	19970710
AU 739723	B2	20011018		
EP 929678	A2	19990721	EP 1997-933443	19970710
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001505535	T2	20010424	JP 1998-505372	19970710
US 2002155120	A1	20021024	US 2001-938406	20010821

PRIORITY APPLN. INFO.: US 1996-21687P P 19960710
WO 1997-US12253 W 19970710
US 1999-214701 A3 19990930

AB A novel **vaccine** composition combines a protein or peptide **antigen**, an optional hydrophobic substance and an immunopotentiating membranous carrier, such as a proteosome, which together preserve the antigenic integrity of the protein or peptide epitopes while at the same time increasing their immunogenicity. Protesomes are derived from the cell membranes of Neisseria meningitidis. The hydrophobic substance is preferably a hydrophobic peptide with a hydrophobic moiety such as a **C8-18 fatty acid** conjugated to it. Administering this composition to a subject provokes a protective immune response of secretory neutralizing **antibodies** present in various mucosal sites in the body. This **vaccine** and the process for using it is intended for use against pathogenic organisms, in particular those causing sexually or mucosally transmitted diseases. Such organisms include bacteria and enveloped viruses, particularly HIV-1.

IT **143-07-7, Lauric** acid, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(stabilizing hydrophobic moiety in **vaccines**; stabilization of protein and peptide **antigens** in **vaccines** for induction of mucosal immunity)

L7 ANSWER 14 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1996:516694 HCAPLUS
DOCUMENT NUMBER: 125:151116
TITLE: **Vaccine** adjuvants comprising a sulfolipid polysaccharides
INVENTOR(S): Hilgers, Luuk
PATENT ASSIGNEE(S): Solvay et Cie., Belg.
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: French
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9620008	A1	19960704	WO 1995-BE119	19951221
W: AL, AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TT, UA, US, UZ, VN				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
BE 1008978	A5	19961001	BE 1994-1174	19941227
CA 2208790	AA	19960704	CA 1995-2208790	19951221
CA 2208849	AA	19960704	CA 1995-2208849	19951221
AU 9643248	A1	19960719	AU 1996-43248	19951221
AU 709104	B2	19990819		
BR 9510223	A	19971230	BR 1995-10223	19951221
EP 814836	A1	19980107	EP 1995-942007	19951221
EP 814836	B1	20010314		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, LT, LV				
CN 1171052	A	19980121	CN 1995-197099	19951221
CN 1175264	A	19980304	CN 1995-197557	19951221
CN 1109049	B	20030521		
AT 199644	E	20010315	AT 1995-942007	19951221
ES 2155540	T3	20010516	ES 1995-942007	19951221
US 6328965	B1	20011211	US 1997-860453	19970915

PRIORITY APPLN. INFO.: BE 1994-1174 A 19941227
WO 1995-BE119 W 19951221

AB **Vaccine** adjuvants comprising a sulfolipid polysaccharide in combination with an interface-forming constituent are claimed. The invention also provides a method for preparing a **vaccine** by emulsifying an aqueous solution of an **antigen** and a sulfolipid polysaccharide. The adjuvants are stable at high temps., and are at least as effective as convenient adjuvants. Their local toxicity is generally lower than that of conventional adjuvants. Thus, 6.6. g of **lauroyl** chloride was added to a solution of 4.5 g inulin in 100 mL of DMF:pyridine (1:1), stirred and incubated for 6 h at 60° and 18 h at room temperature followed by addition of 0.6 g chlorosulfonic acid in 10 mL of DMF:pyridine and stirring and incubation at 60° and room temperature was repeated. The solvents were then evaporated under reduced pressure and the sulfolipid polysaccharide thus obtained was dialyzed in phosphate buffered saline for 10 days, then lyophilized. An emulsion containing 1, Tween 80 2, squalene 10, and phosphate buffered saline q.s. 100% was stable after 115 days at 37°. Guinea pig **immunized** with **vaccines** containing inactivated influenza virus and above adjuvant showed significant elevated serum **antibody** as compared with the controls.

L7 ANSWER 15 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1995:319925 HCAPLUS
DOCUMENT NUMBER: 122:161327
TITLE: Pimelautide or Trimexautide as Built-in Adjuvants Associated with an HIV-1-Derived Peptide: Synthesis and in Vivo Induction of

Antibody and Virus-Specific Cytotoxic T-Lymphocyte-Mediated Response

AUTHOR(S): Deprez, Benoit; Gras-Masse, Helene; Martinon, Frederic; Gomard, Elisabeth; Levy, Jean-Paul; Tartar, Andre

CORPORATE SOURCE: Faculte de Pharmacie, Institut Pasteur de Lille, Lille, 59019, Fr.

SOURCE: Journal of Medicinal Chemistry (1995), 38(3), 459-65
CODEN: JMCMAR; ISSN: 0022-2623

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Covalent association of lipopeptidic immunostimulants is known to improve the immunogenicity of short peptides. Thus, the synthesis of four analogs pure immunogens is described, prepared by two different strategies, in which a hexadecameric peptide (V3) derived from the principal neutralizing domain of HIV-1 envelope glycoprotein was associated with two different murein-derived **lauroyl** -peptides, Pimelautide (RP 44102), or Trimexautide (RP 56142). The in vivo immunogenicity of these compds. was evaluated according to two different criteria: the ability to elicit a cellular-T cytotoxic (CTL response) and the ability to stimulate **antibody** response. These studies show that one of our compds. (TrxSucV3) was able to efficiently induce a relevant virus-specific CTL response, while another one (PimSucV3) was able to stimulate a strong **antibody** response to the linked peptide, or to a co-injected protein. These results suggest that both activities rely on different structure-activity relationships and that such a chemical defined model of peptide **vaccines** may be used to selectively stimulate subpopulations of immunocompetent cells.

L7 ANSWER 16 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN

ACCESSION NUMBER: 1994:570531 HCAPLUS

DOCUMENT NUMBER: 121:170531

TITLE: Minimizing multidrug resistance in cells and tissues in cancer chemotherapy with **antibodies** to P glycoprotein

INVENTOR(S): Nicolau, Yves Claude; Tosi, Pierre Francois

PATENT ASSIGNEE(S): USA

SOURCE: PCT Int. Appl., 54 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9410198	A1	19940511	WO 1993-EP3073	19931102
W: AU, BB, BG, BR, BY, CA, CZ, FI, HU, JP, KP, KR, KZ, LK, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9454204	A1	19940524	AU 1994-54204	19931102
EP 669941	A1	19950906	EP 1994-914250	19931102
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				

PRIORITY APPLN. INFO.: US 1992-970416 19921102
WO 1993-EP3073 19931102

AB **Antigens** derived from the P-glycoprotein involved in multidrug resistance in cancer cells and tissues are used in **vaccines** to raise **antibodies** against the P-glycoprotein in patients with a multidrug resistance cancer or tumor. These **antibodies** to externally accessible regions of the protein reduce multidrug resistance, thus making the cancer or tumor more sensitive to anti-cancer drugs. P-glycoprotein containing compns. including liposomes with portions of P-glycoprotein externally presented on their surfaces, P-protein fragments, modified P-protein fragments and liposomes containing the peptides, or the modified peptides may be used in these **vaccines.** Multidrug resistance in cells and tissues can be reduced either by active **immunization** of an individual having multidrug resistance using antigenic P-glycoprotein-containing compns. or by passive **immunization** via administering an **antibody** or a group of **antibodies** specific for P-protein epitopes. The use of antisera to the protein to increase the sensitivity of MDR L1210 cells to doxorubicin is demonstrated. Cells treated with antiserum to the protein had an LD50 to doxorubicin of 4+10-7 M, compared to 4+10-6 M for L1210 cells and 4+10-5 M for MDR L1210 cells.

IT **143-07-7, Lauric** acid, uses
RL: USES (Uses)
(in liposomes for delivery of P-glycoprotein antigenic peptides in **vaccines** for control of multidrug resistance in cancer chemotherapy)

L7 ANSWER 17 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1994:517600 HCAPLUS
DOCUMENT NUMBER: 121:117600
TITLE: A novel non-mineral oil-based adjuvant. II. Efficacy of a synthetic sulfolipopolysaccharide in a squalane-in-water emulsion in pigs
AUTHOR(S): Hilgers, L. A. Th.; Platenburg, P. L. I.; Luitjens, A.; Groenveld, B.; Dazelle, T.; Weststrate, M. W.
CORPORATE SOURCE: Central Laboratory, Solvay SA, Brussels, 1120, Belg.
SOURCE: Vaccine (1994), 12(7), 661-5
CODEN: VACCDE; ISSN: 0264-410X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The adjuvanticity of a sulfolipopolysaccharide (SLP) incorporated into a squalane-in-water emulsion (SLP/S/W) was compared with that of a mineral oil-in-water (O/W) adjuvant currently used in com. porcine **vaccines.** Groups of pigs were **immunized** twice with **vaccines** comprising either inactivated influenza virus (iFlu3 containing strains A/Swine, MRC-11 and X-79), inactivated pseudorabies virus (iPRV), live pseudorabies virus (PRV) or inactivated porcine parvovirus (iPPV) as **antigen** and SLP/S/W or O/W as adjuvant. **Antibody** titers in serum 2 or 3 wk after the second **immunization** were measured by hemagglutination inhibition (HI) or serum neutralization (SN) assays. Both adjuvants significantly augmented the **antibody** responses against the **antigens** tested. Mean factors of increase obtained by SLP/S/W and O/W were: 315 and 91, resp., for

A/Swine; 478 and 137 for MRC-11; 362 and 128 for X-79; 69 and 49 for iPRV; and 23 and 7 for live PRV. Increased humoral immunity against live PRV was affirmed by reduced levels and duration of virus excreted by pigs after challenge with virulent PRV. **Immunization** of pigs with iPPV plus adjuvant SLP/S/W gave 36-fold higher titers than with O/W. SLP/S/W is more effective than O/W in stimulating humoral immunity against the viral **antigens** examined and that the two constituents SLP and S/W interact synergistically. Advantages of SLP/S/W over O/W include stronger adjuvanticity, better biocompatibility and lower doses of active substances.

L7 ANSWER 18 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1994:517599 HCAPLUS
DOCUMENT NUMBER: 121:117599
TITLE: A novel non-mineral oil-based adjuvant. I. Efficacy of a synthetic sulfolipopolysaccharide in a squalane-in-water emulsion in laboratory animals
AUTHOR(S): Hilgers, L. A. Th.; Platenburg, P. L. I.; Luitjens, A.; Groenveld, B.; Dazelle, T.; Ferrari-Laloux, M.; Weststrate, M. W.
CORPORATE SOURCE: Central Laboratory, Solvay SA, Brussels, 1120, Belg.
SOURCE: Vaccine (1994), 12(7), 653-60
CODEN: VACCDE; ISSN: 0264-410X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Sulfolipopolysaccharides (SLPs) were prepared by reaction of the synthetic polysucrose polymer (Ficoll-400) with chlorosulfonic acid and **lauroyl** chloride in anhydrous medium. Hydrophobic derivs. were obtained by addition of a small number of sulfate and a large number of lipid groups. Gel-permeation HPLC showed a wide range in mol. weight of both Ficoll-400 and SLP polymers. The calculated weight-average mol. weight (Mw) of Ficoll-400 and SLP using polystyrene polymers as refs. was 187,000 and 380,000 resp., exhibiting a 2-fold increase in mol. weight upon derivatization. The adjuvanticity of hydrophobic SLPs with 0.2 sulfate and 1.5 lipid groups per sucrose monomer, a squalane-in-water emulsion (S/W), SLP incorporated into S/W (SLP/S/W), and a mineral oil-based emulsion (O/W) was investigated in combination with different **antigens** in mice and guinea-pigs. **Antibody** responses in serum against ovalbumin (OVA), dinitrophenylated bovine serum albumin (DNP-BSA), inactivated influenza virus strain MRC-11 (MRC-11), a mixture of 3 influenza virus strains (iFlu3) and inactivated pseudorabies virus (iPRV) were measured by either hemagglutination (HA), hemagglutination inhibition (HI) or serum neutralization (SN). **Vaccines** were prepared by simply mixing one volume of **antigen** with one volume of adjuvant solution **Antibody** titers after 1 or 2 injections with these **antigens** were enhanced significantly by SLP/S/W, SLP, S/W and O/W and in most studies, SLP/S/W was demonstrated to be more effective than either the two constituent components or the O/W adjuvant. A hydrophilic SLP-derivative with a high sulfate/lipid ratio incorporated into S/W appeared to be ineffective, which indicates the importance of a hydrophobic character of SLP. Applicability of SLP/S/W as a novel non-mineral oil-based adjuvant is discussed.

L7 ANSWER 19 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1991:653625 HCAPLUS
DOCUMENT NUMBER: 115:253625
TITLE: Comparative immunochemistry of lipopolysaccharides from Branhamella catarrhalis strains
AUTHOR(S): Fomsgaard, Jonna Storm; Fomsgaard, Anders; Hoeiby, Niels; Bruun, Brita; Galanos, Chris
CORPORATE SOURCE: Max-Planck Inst. Immunbiol., Freiburg, D-7800, Germany
SOURCE: Infection and Immunity (1991), 59(9), 3346-9
CODEN: INFIBR; ISSN: 0019-9567
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Lipopolysaccharides (LPS) were extracted and purified from the type strain and from a clin. isolate of B. catarrhalis. Chemical anal. revealed the presence of glucose, galactose, and glucosamine in different molar proportions in the LPS from these two isolates, whereas there was no difference between the two isolates in the ratios of ketodeoxyoctonate, phosphate, and the fatty acids C12, 3-OH-C12, and 3-OH-C11 present. Heptose or 3-OH-C14 was not detectable in either preparation LPS from both strains appeared semirough according to SDS-PAGE anal., presenting a core polysaccharide plus one repeating unit. Immunoblotting, passive hemolysis, and hemolysis inhibition assays using anti-LPS **antibodies** from **immunized** rabbits demonstrated cross-reactivity between the LPS prepns.; however, antigenic dissimilarities were also found, suggesting that more than one serotype may exist. The lipid A isolated from the two LPS was serol. identical and exhibited cross-reactivity with lipid A of members of the family Enterobacteriaceae. The B. catarrhalis LPS were biol. active, causing lethality in D-galactosamine-sensitized C57/BL6 mice and inducing Limulus amoebocyte lysate gelation.
IT **143-07-7**, Dodecanoic acid, biological studies
RL: BIOL (Biological study)
(of lipopolysaccharide, of Branhamella catarrhalis strains)

L7 ANSWER 20 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1987:117735 HCAPLUS
DOCUMENT NUMBER: 106:117735
TITLE: Synthetic sulfolipopolysaccharides: novel adjuvants for humoral immune responses
AUTHOR(S): Hilgers, L. A. T.; Snippe, H.; Jansze, Margriet; Willers, J. M. N.
CORPORATE SOURCE: Anim. Health Div., Duphar BV, Weesp, Neth.
SOURCE: Immunology (1987), 60(1), 141-6
CODEN: IMMUAM; ISSN: 0019-2805
DOCUMENT TYPE: Journal
LANGUAGE: English
AB With reference to the strong immunostimulating activity of combinations of lipophilic agents and dextran sulfate, conjugates with chemical determinants of both types of adjuvants were synthesized and then examined for immunostimulatory capabilities in mice. Saturated fatty acids with varying chain lengths and sulfate groups were coupled covalently at defined ratios to the polysaccharide Ficoll (mol. weight 400,000). Chemical anal. of 60 of the sulfolipopolysaccharides synthesized revealed that the number of sulfate groups per

monosaccharide unit varied from 0 to 1.6, and the number of lipid groups from 0 to 0.8. Adjuvanticity of these conjugates for the humoral immune response was determined, using sheep red blood cells (SRBC) and dinitrophenyl-haptenated bovine serum albumin (DNP-BSA) as **antigens**. Five days after i.p. injection of adjuvant and **antigen**, the nos. of direct anti-SRBC plaque-forming cells (PFC) in the spleen were determined Anti-DNP **antibody** titers were measured 1-4 wk after **immunization**. PFC responses to 2 + 106 SRBC were augmented up to 100-fold by conjugates of Ficoll and sulfate (sulfopolysaccharides: SPs) or lipid groups (lipopolysaccharides: LPs). Adjuvant activity of sulfolipopolysaccharides (SLPs) with varying sulfate and high lipid content depended on the sulfate contents and the chain length of the lipids. Sulfate reduced adjuvanticity of the SLPs, and the number of sulfate groups required for complete annihilation increased with the chain length of the lipid. LPs and SLPs, including conjugates that did not enhance anti-SRBC PFC responses, augmented serum **antibody** responses to DNP-BSA, while SPs were scarcely effective.

L7 ANSWER 21 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1985:442418 HCAPLUS
DOCUMENT NUMBER: 103:42418
TITLE: Caries-preventive composition
INVENTOR(S): Miyahara, Tsuneo; Harada, Yoshihiro; Futakami, Katsuyuki
PATENT ASSIGNEE(S): Lion Corp., Japan
SOURCE: Eur. Pat. Appl., 39 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 140498	A1	19850508	EP 1984-305462	19840810
EP 140498	B1	19890531		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL				
JP 60038329	A2	19850227	JP 1983-146859	19830811
JP 04021649	B4	19920413		
AT 43496	E	19890615	AT 1984-305462	19840810
PRIORITY APPLN. INFO.:			JP 1983-146859	19830811
			EP 1984-305462	19840810

AB A caries-preventive composition contains an **antibody** obtained by **immunizing** a mammal with ≥1 **antigen** selected from Streptococcus mutans, its cell wall fraction, fibrous substance fraction, glucosyltransferase (GTF) [9031-48-5] fraction, and protein **antigen** fraction and a synergist selected from the group consisting of F compds., chlorhexidine [55-56-1] and its salts, lytic enzymes, bacteriocins, GTF inhibitors, protease [9001-92-7], and dextranase [9025-70-1]. E.g., a toothpaste was prepared from CaHPO4.2H2O 50.0, glycerol 20.0, Na CM-cellulose 1.0, Na lauryl sulfate 1.5, Na **lauroyl** sarcosinate 0.5, flavor 1.0, Na saccharide 0.1, and water to 100% blended with 0.1 or 0.2% **antibody** to S. mutans from goats, 0.1% NaF, 0.01% chlorhexidine gluconate [18472-51-0], 0.1% lytic enzyme, 0.01% bacteriocin, 0.001% protease, 0.1% GTF inhibitor A, or 0.25%

dextranase.

L7 ANSWER 22 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1980:405926 HCAPLUS
DOCUMENT NUMBER: 93:5926
TITLE: Characterization of immune responses of cattle to erythrocyte stroma, anaplasma **antigen**, and dodecanoic acid-conjugated anaplasma **antigen**: cell-mediated immunity
AUTHOR(S): Francis, D. H.; Buening, G. M.; Amerault, T. E.
CORPORATE SOURCE: Coll. Vet. Med., Univ. Missouri, Columbia, MO, 65201, USA
SOURCE: American Journal of Veterinary Research (1980), 41(3), 368-71
CODEN: AJVRAH; ISSN: 0002-9645
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Sonically disrupted normal erythrocyte stroma (SES) and two anaplasma **antigens** (sonically disrupted anaplasma **antigen**, SAA; and French pressure cell disrupted anaplasma **antigen**, FAA) were prepared from normal and Anaplasma marginale-infected blood. The SAA and FAA **antigens** were chemical modified by conjugation with dodecanoic acid (SAADA and FAADA). Significant antianaplasma lymphocyte-transformation responses were obtained from all cattle given SAA, SAADA, or FAADA **vaccines**. Only cows given SAA developed antianaplasma **antibody**. Mild antierythrocyte lymphocyte-transformation responses were obtained from most **vaccinated** animals. Delayed hypersensitivity to erythrocyte **antigen** was not detected. The SAA-**vaccinated** cows had the highest degree of protection in that they developed a smaller percentage of parasitemia and had less severe anemia than did other cattle in the study. The SAADA- and FAADA-**vaccinated** cattle developed a good cell-mediated immune response, but poor humoral immune response and had lower parasitemias than did challenge-exposed controls; however, they developed severe anemia. Probably, cellular and humoral mechanisms are essential for protection in anaplasmosis. Evidence of protection from clin. anaplasmosis was not observed in SES-**vaccinated** cows.
IT **143-07-7D**, Anaplasma **antigen**-conjugates
RL: BIOL (Biological study)
(immune response to, in cattle)

L7 ANSWER 23 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1980:405925 HCAPLUS
DOCUMENT NUMBER: 93:5925
TITLE: Characterization of immune responses of cattle to erythrocyte stroma, anaplasma **antigen**, and dodecanoic acid-conjugated anaplasma **antigen**: humoral immunity
AUTHOR(S): Francis, D. H.; Buening, G. M.; Amerault, T. E.
CORPORATE SOURCE: Coll. Vet. Med., Univ. Missouri, Columbia, MO, 65201, USA
SOURCE: American Journal of Veterinary Research (1980), 41(3), 362-7
CODEN: AJVRAH; ISSN: 0002-9645
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Normal erythrocyte **antigen** (sonically disrupted erythrocyte stroma; SES) and 2 anaplasma **antigens** (sonically disrupted anaplasma **antigen**, SAA; and French pressure cell-disrupted anaplasma **antigen**, FAA) were prepared from normal and Anaplasma marginale-infected blood. Portions of SAA and FAA **antigens** were chemical modified by conjugation with dodecanoic acid (SAADA and FAADA). Eleven cattle were **vaccinated** with SES, SAA, SAADA, or FAADA. Five weeks later, the 11 cattle, together with 3 controls, were challenge exposed with A. marginale. The anti-anaplasma **antibody** response and the antierythrocyte-**antibody** response (including the blood group isoantibody response) were evaluated. Only SAA-**vaccinated** cattle developed anti-anaplasma **antibody** before challenge exposure. Isoantibodies were developed by 1 of the 3 SAADA-**vaccinated** cows and 1 of the 2 FAADA-**vaccinated** cows, as well as by all 3 SAA-**vaccinated** cows. After challenge exposure, all cattle developed anti-anaplasma **antibody** and antierythrocyte autoantibody.

IT **143-07-7D**, Anaplasma **antigen** conjugates
RL: BIOL (Biological study)
(**antibody** formation in response to, by cattle)

L7 ANSWER 24 OF 24 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1969:71062 HCAPLUS
DOCUMENT NUMBER: 70:71062
TITLE: **Antigen**-adjuvant emulsion composition
INVENTOR(S): Strazdins, Edward; Webb, Richard L.; Cabasso, Victor J.
PATENT ASSIGNEE(S): American Cyanamid Co.
SOURCE: S. African, 34 pp.
CODEN: SFXXAB
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ZA 6705299		19680502		
DE 1617304			DE	
FR 1549339			FR	
FR 7527			FR	
GB 1189340			GB	

PRIORITY APPLN. INFO.: US 19670721

AB **Antigen** material is incorporated into WO (H2O-in-oil) or WOW (H2O-in-oil-in-H2O) emulsions which are prepared and which contain a polyvalent metallic cation and a fatty acid having 12-24 C. Thus, a solution composed of 0.484 g. Al2(SO4)3·18H2O (I) in 10 ml. glycine buffer (0.3M aqueous glycine solution, pH 7, containing 0.01% merthiolate) is adjusted to pH 9 with 6N NaOH, admixed with 0.88 ml. tetanus toxoid (630 Lf units/ml.), made up to 25 ml. with glycine buffer, and added dropwise with good agitation to a solution of 1.242 g. stearic acid in 24 ml. peanut oil. The resulting WO emulsion is added to 50 ml. Al(OH)3 suspension (0.968 g. I in glycine buffer and adjusted to pH 9) and the mixture ultrasonically agitated 10 sec. This WOW emulsion contains 6 Lf units tetanus toxoid/ml. Most of the oil droplet diams. are 1-9 μ and at least 80% of these

contain inner H2O droplets. On centrifugation 45 min. at 300 + g., no sep. oil layer is detected. Similarly prepared are WO emulsions in which the glycine solution is replaced with deionized H2O or phosphate-buffered saline; the peanut oil with soya bean or mineral oil; stearic acid with **lauric** or oleic acid; and I with MgCl2·6H2O, ceric ammonium sulfate dihydrate, FeCl3·6H2O, AlCl3·6H2O, or alum gel. These emulsions are changed into WOW emulsions by ultrasonic agitation in an aqueous phase following the addition of either a conventional emulsifying agent, e.g. Tween 80 or addnl. amts. of the hydrated salts of aluminum or ferric iron and the fatty acids. Mice are **immunized** with a single s.c. 0.5 ml. dose of (a) the above prepared WOW emulsion, (b) aqueous toxoid containing 6 Lf units/ml., and (c) none. After 14 days all of the mice (in groups of 10) are given varying doses of tetanus toxin i.m. After 4 days the number of survivors in each group and the toxin μg. doses for that group are for c 10 at 0.001, 0 at 0.01 (and above); b 2 at 12.5, 0 at 25; a 5 at 50, 2 at 100, and 1 at 200. In similar tests, WOW emulsions containing Taiwan strain influenza **vaccine** give superior results compared to the aqueous **vaccines**. The WOW emulsions are used to give improved immunological results with a more rapid **antibody** formation.

(FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, JAPIO' ENTERED AT 15:17:05 ON 14 NOV 2003)

L8 34 S L7
L9 19 DUP REM L8 (15 DUPLICATES REMOVED)

L9 ANSWER 1 OF 19 MEDLINE on STN DUPLICATE 1

ACCESSION NUMBER: 2002729535 MEDLINE
DOCUMENT NUMBER: 22379675 PubMed ID: 12492276
TITLE: Isolation of immunogenic outer membrane proteins from Mannheimia haemolytica serotype 1 by use of selective extraction and immunoaffinity chromatography.
AUTHOR: McVicker Jerry K; Tabatabai Louisa B
CORPORATE SOURCE: Department of Veterinary Microbiology and Preventive Medicine, College of Veterinary Medicine, Ames, IA 50011, USA.
SOURCE: AMERICAN JOURNAL OF VETERINARY RESEARCH, (2002 Dec) 63 (12) 1634-40.
Journal code: 0375011. ISSN: 0002-9645.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200302
ENTRY DATE: Entered STN: 20021221
Last Updated on STN: 20030214
Entered Medline: 20030213

AB OBJECTIVE: To use **antibodies** produced by calves in response to infection with Mannheimia haemolytica in immunoaffinity chromatography for the identification and subsequent isolation of the dominant immunogenic **antigens** from bacteria grown in iron-deficient media. SAMPLE POPULATION: Serum from 10 calves actively infected with M haemolytica. PROCEDURE: An outer membrane protein fraction was obtained from sonicated salt-extracted M haemolytica cells by extraction with N-**lauroyl** sarcosinate. The immunoglobulin fraction of serum from calves

actively infected with M haemolytica was used to prepare an immunoaffinity column. The immunoaffinity column was used to isolate the dominant immunogenic proteins from the outer membrane protein fraction. The resultant immunogenic protein fraction was subjected to ELISA and immunoblot methods as well as carbohydrate quantification. Sequencing of the N-terminal was performed on the most prominent protein. RESULTS: 5 immunogenic proteins with molecular weights of 42, 30, 24, 20, and 15 kd were isolated. The immunogenic protein fraction was found to contain 51% carbohydrate. The immunoaffinity column capacity was 1 microg of immunogenic protein/mL of gel. The N-terminal sequence of the 42-kd protein was Tyr-Gln-Thr-Tyr-Gln-Ser-X-Leu-Gln, where X could not be identified. CONCLUSIONS AND CLINICAL RELEVANCE: Immunogenic proteins were isolated by use of immunoaffinity chromatography. A substantial amount of carbohydrates was co-purified in the process. Additional experiments are needed to determine whether the carbohydrates would hinder or enhance development of **vaccine** preparations.
This method could potentially allow a more rapid production of **antigens** for use in **vaccines**.

L9 ANSWER 2 OF 19 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
ACCESSION NUMBER: 2001-432814 [46] WPIDS
DOC. NO. CPI: C2001-130943
TITLE: Polymerizable compound for use as a medicament, comprises a peptide, a spacer and a monomer unit capable of forming a polymer with a further monomer unit in a further polymerizable compound, covalently linked to a spacer.
DERWENT CLASS: B04 D16
INVENTOR(S): RAMESH, B S; ZUCKERMAN, J N
PATENT ASSIGNEE(S): (UNLO) UNIV COLLEGE LONDON
COUNTRY COUNT: 21
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001047549 A2		20010705	(200146)*	EN	21

RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
W: JP US

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001047549 A2		WO 2000-GB4951	20001221

PRIORITY APPLN. INFO: GB 1999-30585 19991223
AN 2001-432814 [46] WPIDS
AB WO 200147549 A UPAB: 20010815
NOVELTY - A polymerizable compound for use as medicament, comprising a peptide, a spacer covalently linked to the peptide and a monomer unit covalently linked to the spacer, where the monomer is capable of forming a polymer with at least one further monomer unit in a further polymerizable compound, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) a **vaccine** composition comprising the

polymerizable compound and an adjuvant; and
(2) production of a **vaccine**, involving formulating the **vaccine** from the compound and an adjuvant.
ACTIVITY - Virucide; antibacterial. Male mice (8 weeks old) with haplotypes, Balb/c(H-2d) Balb/c(h-2k) and B 10.S(H-2s) were **immunized** by injecting intraperitoneally and subcutaneously, with 100 micro g of acrylated cysteinyl peptide complexed in 100 micro g of **lauroyl**-Arg Gly Asp in phosphate buffered saline (PBS). A control was prepared by injecting non-acrylate peptide with **lauroyl**-RGD peptide. The mice were boosted after 3 weeks with same dose and route. Blood from the mice was withdrawn from the retro-orbital sinus, after three weeks and serum was collected after clotting. The obtained serum was immunologically assayed by an enzyme linked immunosorbant assay (ELISA). Peptides (1 micro g/ml) in carbonate/bicarbonate buffer (pH 9) were incubated at 4 deg. C overnight. Additionally binding size was blocked with 5 % skimmed milk (Marvel; RTM) for 2 hours at room temperature. The place was washed with wash-buffer. **Antibodies** (dilution of murine sera) were then added to the antisera and incubated for 2 hours at room temperature. The plates were washed with buffer and added with goat anti-mouse immunoglobulin (Ig)G conjugated to horseradish peroxidase (1:500 diluted in PBS/milk), as secondary **antibodies** and incubated for 1 hour at room temperature. The bound conjugated was reacted with chromogen o-phenylenediamine dihydrochloride (50 micro g/ml) for 30 min. The results showed that non-responders responded only after one boost.
MECHANISM OF ACTION - **Vaccine.**
USE - The compound is used for preparation of a composition for use as a **vaccine** (claimed), as an immunogenic component for the **vaccine**, especially hepatitis B or bacteria.
ADVANTAGE - The simple peptide-containing monomer can be effectively used as an immunogenic component for a **vaccine** , inspite of the relative small size.
Dwg.0/0

L9 ANSWER 3 OF 19 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 1998425669 MEDLINE
DOCUMENT NUMBER: 98425669 PubMed ID: 9754674
TITLE: Influence of immunoadjuvants and a promiscous T-cell determinant on the immunogenicity of RESA peptide **antigen** of P. falciparum.
AUTHOR: Chaba B; Kumar P; Haq W; Sabhnani L; Rao D N
CORPORATE SOURCE: Department of Biochemistry, All India Institute of Medical Sciences, New Delhi.
SOURCE: INTERNATIONAL JOURNAL OF IMMUNOPHARMACOLOGY, (1998 Jun) 20 (6) 259-73.
Journal code: 7904799. ISSN: 0192-0561.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199812
ENTRY DATE: Entered STN: 19990115
Last Updated on STN: 19990115
Entered Medline: 19981201
AB Synthetic peptide **antigens** representing the repeat sequences of malarial **antigens** showed poor immunogenicity and protection in clinical trials. In the present study, RESA, an

asexual blood stage **antigen**, containing (EENVEHDA)2 and (DDEHVEEPTVA)2 sequences were chemically linked to a promiscous T-cell determinant (CS.T3) of the circumsporozoite protein of P. falciparum. The synthetic constructs either alone or coentrapped with immunoadjuvants (nor muramyl dipeptide/**lauroyl** tetrapeptide) were administered in liposomes to mice of varying genetic background and the immunogenicity of different formulations were compared under identical experimental conditions. The RESA peptide formulations containing the T-cell determinant and the adjuvants generated high titre and affinity **antibodies** in all the strains, as compared to peptide(s) alone. The booster **immunization** induced a strong anamnestic response in each group. Though the major IgG isotype is of IgG1 and IgG2b interestingly, formulations containing CS.T3 have a higher proportion of cytophilic IgG2b isotype. There was a significant fall in the levels of IgG2b isotype while IgG1 levels were maintained same in the third bleed (day 60, without booster **immunization**). The mixed peptide group preparation containing the adjuvant is found to be a better immunogen than that of respective peptides itself. The in vitro merozoite reinvasion inhibition assay showed 76-96% inhibition with the formulations containing RESA peptide(s)-CS.T3 and the adjuvant, while with peptides alone the inhibition was 50-56%. This study highlights the importance of an alternative approach for developing peptide based immunogen against malaria.

L9 ANSWER 4 OF 19 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
ACCESSION NUMBER: 1994-068301 [09] WPIDS
CROSS REFERENCE: 1986-179243 [28]
DOC. NO. CPI: C1994-030473
TITLE: Dental caries preventing agents - comprises **antibody** obtd. by **immunisation** with whole cell or components of Streptococcus mutans and carrageenan.
DERWENT CLASS: B04 D16 D21
PATENT ASSIGNEE(S): (LIOY) LION CORP
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 06009356	A	19940118	(199409)*		8
JP 07002630	B2	19950118	(199507)		8

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
JP 06009356	A	Div ex	JP 1984-232353	19841106
			JP 1993-56491	19841106
JP 07002630	B2	Div ex	JP 1984-232353	19841106
			JP 1993-56491	19841106

FILING DETAILS:

PATENT NO	KIND		PATENT NO
JP 07002630	B2	Based on	JP 06009356

PRIORITY APPLN. INFO: JP 1984-232353 19841106; JP 1993-56491 19841106
AN 1994-068301 [09] WPIDS
CR 1986-179243 [28]
AB JP 06009356 A UPAB: 19940418
Agents comprise **antibody** obtainable by **immunisation** of animals with the whole cell or cell components of Streptococcus mutans together with carrageenan.

The Streptococcus mutans is human S. mutans strains or their mutants whose serotype is c, d, e, f, or g. The mutant is S. mutans K-Dp KH2, or K-III. The cell component is cell wall fractions, fibrous structure fractions, pilus component fractions, glucosyltransferase fractions or protein **antigen** fractions. **Antibody**-containing antiserum or milk is included as the **antibody**. Separated fractions from the **antibody**-containing antiserum or milk is included as the **antibody**. The amount of the **antibody** is 0.0002-10 weight% of the whole agents. The amount of carrageenan is 0.001-10 weight% of the whole agents. The pH of the agents is in the range of 4-10.

USE/ADVANTAGE - The agents can inhibit the formation of deposits on the tooth and prevent the occurrence of dental caries. The combined use with carrageenan can prevent the **antibody** from inactivation and effectively render is active even after a long term storage.

In an example, a tooth paste contained 2.5% propylene glycol, 1.0% carrageenan, 0.1% methylparaben, 0.01% butylparaben, 0.2% Na benzoate, 30.0% 60% sorbit liquid, 0.15% saccharin Na, 0.76% Na monofluorophosphate, 0.01% chlorhexidine HCl, 0.8% Na laurylsulphate, 0.2% Na **lauroyl** sarcosinate, 0.8% polyoxyethylene (40 mol) hardened castor oil, 0.6% perfume, 35.0% silica for polishing, 0.01% whole cell **antibody** of equine anti S. mutans JC 2, 0.01% lysozyme, and pure water.
Dwg.0/0

L9 ANSWER 5 OF 19 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 94367629 MEDLINE
DOCUMENT NUMBER: 94367629 PubMed ID: 8085385
TITLE: A novel non-mineral oil-based adjuvant. I. Efficacy of a synthetic sulfolipopolysaccharide in a squalane-in-water emulsion in laboratory animals.
AUTHOR: Hilgers L A; Platenburg P L; Luitjens A; Groenveld B; Dazelle T; Ferrari-Laloux M; Weststrate M W
CORPORATE SOURCE: Solvay SA, Central Laboratory, Brussels, Belgium.
SOURCE: VACCINE, (1994 May) 12 (7) 653-60.
Journal code: 8406899. ISSN: 0264-410X.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199410
ENTRY DATE: Entered STN: 19941021
Last Updated on STN: 19941021
Entered Medline: 19941013
AB Sulfolipopolysaccharides (SLPs) were synthesized by reaction of the synthetic polysucrose polymer Ficoll-400 with chlorosulfonic acid and **lauroyl** chloride in anhydrous medium. Hydrophobic derivatives were obtained by addition of a small number of sulfate

and a large number of lipid groups. Gel-permeation high-performance liquid chromatography (g.p.-h.p.l.c.) exhibited a wide range in molecular weight of both Ficoll-400 and SLP polymers. The calculated weight-average molecular weight (Mw) of Ficoll-400 and SLP using polystyrene polymers as references was 187,000 and 380,000 respectively, exhibiting a twofold increase in molecular weight upon derivatization. Adjuvanticity of hydrophobic SLPs with 0.2 sulfate and 1.5 lipid groups per sucrose monomer, a squalane-in-water emulsion (S/W), SLP incorporated into S/W (SLP/S/W), and a mineral oil-based emulsion (O/W) was investigated in combination with different **antigens** in mice and guinea-pigs.
Antibody responses in serum against ovalbumin (OVA), dinitrophenylated bovine serum albumin (DNP-BSA), inactivated influenza virus strain MRC-11 (MRC-11), a mixture of three influenza virus strains (iFlu3) and inactivated pseudorabies virus (iPRV) were measured by either haemagglutination (HA), haemagglutination inhibition (HI) or serum neutralization (SN). **Vaccines** were prepared by simply mixing one volume of **antigen** with one volume of adjuvant solution. **Antibody** titres after one or two injections with these **antigens** were enhanced significantly by SLP/S/W, SLP, S/W and O/W and in most studies, SLP/S/W was demonstrated to be more effective than either the two constituent components or the O/W adjuvant.(ABSTRACT TRUNCATED AT 250 WORDS)

L9 ANSWER 6 OF 19 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
ACCESSION NUMBER: 1993-232274 [29] WPIDS
DOC. NO. CPI: C1993-103347
TITLE: Preparation of **antibody** for hair improver - involves **immunising** cow with protein to give **antibody** in milk.
DERWENT CLASS: B04 D16 D21
PATENT ASSIGNEE(S): (KANE) KANEBO LTD
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 05155783	A	19930622	(199329)*		11
JP 2942406	B2	19990830	(199941)		11

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 05155783	A	JP 1991-348831	19911204
JP 2942406	B2	JP 1991-348831	19911204

FILING DETAILS:

PATENT NO	KIND		PATENT NO
JP 2942406	B2	Previous Publ.	JP 05155783

PRIORITY APPLN. INFO: JP 1991-348831 19911204
AN 1993-232274 [29] WPIDS
AB JP 05155783 A UPAB: 19931116
Preparation of the **antibody** comprises **immunising** the

cow family animal with the protein consisting of keratin type middle-dia. filament to give the **antibody** in its milk. Preparation of the hair improver comprises feeding the protein conssting of keratin type middle-dia. filament to cow family animal to give the **antibody** in its milk.

USE - The **antibody** has affinity to hair specifically to improve hair quality.

In an example, 5g each normal hair of male and female were mixed, washed with 2% polyoxyethylene Na **lauric** sulphate (3E.O.), added to 2.51 0.2M tris HCl buffer solution (pH 9.2) containing 8M urea and 0.2M 2-mercaptoethanol, stirred at 50 deg. C with N2 bubbling for 1 hr. and ground by a Teflon homogeniser. The same operation was done once more and hair keratin **antigen** was extracted by 10000 x g centrifugation for 30 min.. 20 ml iode acetate was added to stop the reaction and dialysed with enough water to 5 micro m filter to give 6l hair keratin **antigen** solution. To 4 pts. weight the **antigen** solution 1 pts. weight 0.5M Na acetate buffer solution (pH 4.2) was added and prepared to pH 4.2 with acetic acid to ppte. the hair keratin at isoelectric point. The ppte. by 1000 xg centrifugation for 10 min. was dissolved in physiological salt solution, filtered with 0.2 micro m filter, concentrate by ultrafiltration membrane to give purified hair keratin **antigen** (2.6g as protein). The **antigen** was prepared to 20 ml/ml protein concentrate with physiological salt solution and the **antigen** solution and FCA was mixed at 1:1 to give the W/O emulsion, 1 ml of the emulsion (10 mg **antigen**) was administered every 10 days (3 times:subcutaneous:then 2 times:intramuscular). After the delivery, the first lactation was collected for 3 days. The fatty layer was separated by a cream separator to give 21.3g skim milk with 200g 1gG.

Dwg.0/0

L9 ANSWER 7 OF 19 MEDLINE on STN

ACCESSION NUMBER: 91311388 MEDLINE
DOCUMENT NUMBER: 91311388 PubMed ID: 1713258
TITLE: Characterization and comparative bactericidal activity of monoclonal **antibodies** to Bordetella pertussis lipo-oligosaccharide A.
AUTHOR: Archambault D; Rondeau P; Martin D; Brodeur B R
CORPORATE SOURCE: National Laboratory for Immunology, Laboratory Centre for Disease Control, Ottawa, Ontario, Canada.
SOURCE: JOURNAL OF GENERAL MICROBIOLOGY, (1991 Apr) 137 (Pt 4) 905-11.
Journal code: 0375371. ISSN: 0022-1287.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199108
ENTRY DATE: Entered STN: 19910913
Last Updated on STN: 19960129
Entered Medline: 19910829

AB Spleen cells from mice **immunized** with a Bordetella pertussis N-**lauroyl** sarcosine membrane extract (SME) were used to generate hybridoma cells lines producing monoclonal **antibodies** (mAbs). Seven mAbs were shown to be specific to B. pertussis lipo-oligosaccharide (LOS) by immunoblotting of SME or

purified LOS following SDS-PAGE. All mAbs reacted with the B. pertussis Tohama I strain of the LOS AB phenotype, and did not react with the atypical variant strain 134 of the LOS B phenotype. The immune reactivity of the mAbs was retained after treatment of SME with proteinase K and was lost after sodium periodate treatment. No cross-reactivity was observed with the mAbs when tested against B. parapertussis and other Gram-negative bacteria. However, all mAbs reacted with B. bronchiseptica. Binding assays with live B. pertussis cells demonstrated that mAbs strongly reacted with cell surface exposed antigenic determinants. High bacterial cell lytic capability was observed for five of these mAbs. Concentrations between 0.22 and 2.2 micrograms mAb ml-1 (0.1 and 1 microgram per 450 microliter assay) purified by protein A were required to kill at least 50% of the bacteria. Competition immunoassays with biotinylated **antibodies** showed that the bacteriolytic and non-bacteriolytic mAbs were directed to different epitopes of the B. pertussis LOS A.

L9 ANSWER 8 OF 19 MEDLINE on STN
ACCESSION NUMBER: 88204920 MEDLINE
DOCUMENT NUMBER: 88204920 PubMed ID: 2452484
TITLE: Proteosome-lipopeptide **vaccines**: enhancement of immunogenicity for malaria CS peptides.
AUTHOR: Lowell G H; Ballou W R; Smith L F; Wirtz R A; Zollinger W D; Hockmeyer W T
CORPORATE SOURCE: Department of Bacterial Diseases, Walter Reed Army Institute of Research, Washington, DC 20307-5100.
SOURCE: SCIENCE, (1988 May 6) 240 (4853) 800-2. Journal code: 0404511. ISSN: 0036-8075.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198806
ENTRY DATE: Entered STN: 19900308
Last Updated on STN: 19960129
Entered Medline: 19880603

AB Proteosomes are hydrophobic, membranous, multimolecular preparations of meningococcal outer membrane proteins that are also B cell mitogens. These characteristics suggested that proteosomes may serve as carrier proteins and adjuvants to enhance peptide immunogenicity. Although high titers of malaria circumsporozoite (CS) **antibodies** protect against malaria, **vaccines** thus far tested in humans have been insufficiently immunogenic to be clinically useful. Here it is shown that synthetic CS peptides hydrophobically complexed to proteosomes by way of **lauroyl** -cysteine become highly immunogenic in mice without other adjuvants. The high titers of **antibodies** produced and the safety of proteosomes in humans suggest that this novel system is widely applicable for the development of peptide **vaccines** to protect against many diseases.

L9 ANSWER 9 OF 19 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
ACCESSION NUMBER: 1983-796602 [43] WPIDS
DOC. NO. CPI: C1983-102725
TITLE: Immuno stimulant N-glycosyl-carboxamide derivs. - e.g. n-octadecyl-n-d-gluco pyranosyl-**lauric**

acid amide prepared by N-acrylation of glycosyl amine cpds..

DERWENT CLASS: B04 C03 D16
INVENTOR(S): LOCKHOFF, O; OPITZ, H G; SCHALLER, K; STADLER, P
PATENT ASSIGNEE(S): (FARB) BAYER AG
COUNTRY COUNT: 25
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 91645	A	19831019	(198343)*	GE	64
R: AT BE CH DE FR GB IT LI LU NL SE					
DE 3213650	A	19831027	(198344)		
AU 8312615	A	19831020	(198349)		
JP 58188891	A	19831104	(198350)		
NO 8301163	A	19831107	(198351)		
FI 8301230	A	19831130	(198403)		
DK 8301628	A	19831205	(198404)		
ZA 8302580	A	19831116	(198411)		
PT 76502	A	19840412	(198419)		
ES 8402313	A	19840416	(198423)		
HU 31247	T	19840428	(198424)		
EP 91645	B	19870225	(198708)	GE	
R: AT BE CH DE FR GB IT LI LU NL SE					
DE 3369851	G	19870402	(198714)		
US 4683222	A	19870728	(198732)		
CA 1230594	A	19871222	(198808)		
IL 68350	A	19880930	(198850)		
JP 01040036	B	19890824	(198938)		
KR 9200312	B1	19920111	(199339)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 91645	A	EP 1983-103325	19830406
JP 58188891	A	JP 1983-61065	19830408
ZA 8302580	A	ZA 1983-2580	19830413
US 4683222	A	US 1985-725060	19850419
KR 9200312	B1	KR 1983-1562	19830414

PRIORITY APPLN. INFO: DE 1982-3213650 19820414
AN 1983-796602 [43] WPIDS
AB EP 91645 A UPAB: 19930925

N-Glycosyl-carboxamide derivs. (I) are new, (where Z is a glycosyl residue bound via the anomeric C-atom; R1 is H or an opt. mono- or polyunsatd. hydrocarbon residue containing up to 30 C-atoms, opt. interrupted by O, N or S; and R2 is H or an opt. mono- or polyunsatd. alkyl or aralkyl residue containing up to 30 C-atoms which can be interrupted by O or be substd. by O-containing gps. or halogen atoms; provided that COR1 does not represent a 1-5C acyl gp. when R2 is 10-20C alkyl).

The new cpds. exhibit immunostimulant activity and a non-specific potentiation of host defence mechanisms, as shown experimentally by potentiation of production of **antibodies** against sheep erythrocytes in vitro, potentiation of **antibody** production against sheep erythrocytes and ovalbumin

in vivo, and potentiation of macrophage superoxide production The new cpds. can be used as adjuvants in combination with **vaccines** against bacterial, viral or parasitic causative organisms, and in combination with various **antigens** in the experimental and industrial production of antisera for therapeutic and diagnostic purposes. The cpds. may also be used alone to potentiate existing immunological reactions in humans and animals; thus, they increase survival rates in systemic candidiasis in mice.
0/0

ABEQ EP 91645 B UPAB: 19930925
Compounds of the general formula (I) wherein Z denotes a monosaccharide radical or a maltose radical bonded via the anomeric carbon atom, R denotes an optionally substituted straight-chain or branched, saturated alkyl radical with 9 to 21 C atoms or a mono- or diunsaturated alkenyl radical with 7 to 21 C atoms and R2 denotes a straight-chain or branched, saturated or mono- or polyunsaturated alkyl or aralkyl radical with up to 30 C atoms which is optionally substituted by groups containing up to 5 oxygen atoms, or halogen atoms, or an alkoxyalkyl radical or (alkoxyalkoxy)-alkyl radical with up to 30 O and C atoms.

ABEQ US 4683222 A UPAB: 19930925
N-Glycosylated carboxamide derivs. of formula (I) are new. In (I), Z is glycosyl bonded via anomeric C atom; R1 is 9-21C alkyl opt. substd.; R2 is 9-21C alkyl, 7-21C alkenyl, up to 30C aralkyl with mono- or bi-carbocyclic aryl and 1-4C alkyl, opt. halo-substd.
Specific cpd. is N-octadecyl-N-D-glucopyranosyl- L-auramide.
Prepn. of (I) comprises reacting glycoside with amine R2-NH2 to Z-NH-R2, then acylating with R1-CO-X in which X is leaving gp.
USE - (I) stimulate prodn. of immune system **antibodies** and activate macrophages and are used in treatment of chronic and acute infections (bacterial, viral, parasitic) and against tumours. They are also used as adjuvants for **vaccination**.

L9 ANSWER 10 OF 19 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
ACCESSION NUMBER: 1982-00326E [01] WPIDS
TITLE: Immunostimulant and **vaccine** adjuvant tetra- and penta peptide(s) - containing fatty acid acyl gps. e.g. N-alpha-N,N-**lauroyl** -L-alanyl gamma-D-glutamyl N-epsilon-glycyl-L-lysine.
DERWENT CLASS: B04
INVENTOR(S): BOUCHAUDON, J; FARGE, D; JAMES, C
PATENT ASSIGNEE(S): (RHON) RHONE POULENC IND
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
FR 2482960	A	19811127	(198201)*		62

PRIORITY APPLN. INFO: FR 1979-16845 19790629; FR 1980-11233 19800520
AN 1982-00326E [01] WPIDS
AB FR 2482960 A UPAB: 19930915
Tetra- and penta-peptides, based on the parent applicn. 79.16845, having formula (II) and their salts are new

R-NH-CH(CH3)-CO-NH-CH(-CO-R1) -CH2-CH2-CO-NH-CHR2-(CH2)3-CHR4-NH-R3 (II)

R is H or a fatty acid resdue (pref. 1-45C alkanoyl (opt. substd. by hydroxy, phenyl or cyclohexyl), 3-30C alkenoyl opt. containing further double bonds or a mycolic acid residue); R1 is hydroxy, amino or 1-4C alkoxy, opt. substd. by phenyl or nitrophenyl; one of R2 and R4 is H, carboxy, carbamoyl, 2-5C alkoxycarbonyl (opt. substd. by phenyl or nitrophenyl), n-carbonyl-glycyl or N-carbonyl-alaryl (opt. esterified by 1-4C alkyl, opt. substd. by phenyl or nitrophenyl) and the other is H, carboxy, carbamoyl or 2-5C alkoxycarbony, (opt. substd. by phenyl or nitrophenyl); R3 is H, a fatty acid residue or glycyl or D-alonyl with the amino gp. substd. by a fatty acid . (II) are immunostimulants and adjuvants (**vaccines**) which increase hypersensitivity reactions and/or increase prods. of circulating **antibodies** w.r.t. **antigens** with which they are admin.. They stimulate, non-specifically, the defince mechanisms against certain infections and tumours, e.g. histeria monocytogenes intracellular bacterial infections in mice. Activity tests are mentioned.

L9 ANSWER 11 OF 19 MEDLINE on STN DUPLICATE 4

ACCESSION NUMBER: 82029711 MEDLINE
DOCUMENT NUMBER: 82029711 PubMed ID: 6456998
TITLE: Suppression of IgE **antibody** response by the fatty acid-modified **antigen**.
AUTHOR: Segawa A; Borges M S; Yokota Y; Matsushima A; Inada Y; Tada T
SOURCE: INTERNATIONAL ARCHIVES OF ALLERGY AND APPLIED IMMUNOLOGY, (1981) 66 (2) 189-99.
Journal code: 0404561. ISSN: 0020-5915.
PUB. COUNTRY: Switzerland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198112
ENTRY DATE: Entered STN: 19900316
Last Updated on STN: 19970203
Entered Medline: 19811215

AB Ovalbumin (OA) of hens was chemically coupled with fatty acids (**lauric** acid, myristic acid, palmitic acid and stearic acid). These hydrophobically modified **antigens** were unable to react with mouse antiserum against native OA and were incapable of eliciting primary and secondary anti-OA **antibody** responses in BALB/c mice. Preadministration of these modified **antigens**, especially of palmitoyl OA (OA-pal), suppressed both primary and secondary anti-OA IgE **antibody** responses without affecting IgG **antibody** production. Administration of OA-pal after the primary **immunization** resulted in a rapid decrease of the ongoing anti-OA IgE **antibody** production and inhibited the anamnestic anti-OA IgE **antibody** response upon subsequent **immunization** with OA. The passive transfer of spleen cells from OA-pal-treated animals with OA-primed spleen cells suppressed the adoptive secondary anti-OA IgE **antibody** response in irradiated recipients. The suppressive effect was abrogated by treatment with an anti-T-cell antiserum indicating that suppressor T cells were primed by administration of hydrophobically modified **antigens**.

L9 ANSWER 12 OF 19 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 80173515 MEDLINE
DOCUMENT NUMBER: 80173515 PubMed ID: 7369609
TITLE: Characterization of immune responses of cattle to erythrocyte stroma, Anaplasma **antigen**, and dodecanoic acid-conjugated Anaplasma **antigen** : cell-mediated immunity.
AUTHOR: Francis D H; Buening G M; Amerault T E
SOURCE: AMERICAN JOURNAL OF VETERINARY RESEARCH, (1980 Mar) 41 (3) 368-71.
Journal code: 0375011. ISSN: 0002-9645.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198006
ENTRY DATE: Entered STN: 19900315
Last Updated on STN: 19970203
Entered Medline: 19800627

AB Sonically disrupted normal erythrocyte stroma (SES) and two anaplasma **antigens** (sonically disrupted anaplasma **antigen**; SAA, and French pressure cell disrupted anaplasma **antigen**; FAA) were prepared from normal and Anaplasma marginale-infected blood. The SAA and FAA **antigens** were chemically modified by conjugation with dodecanoic acid (SAADA and FAADA). Significant (P less than or equal to 0.05) anti-anaplasma lymphocyte-transformation responses were obtained from all cattle given SAA, SAADA, or FAADA **vaccines**. Only cows given SAA developed anti-anaplasma **antibody**. Mild antierythrocyte lymphocyte-transformation responses were obtained from most **vaccinated** animals. Delayed hypersensitivity to erythrocyte **antigen** was not detected. The SAA-**vaccinated** cows had the highest degree of protection in that they developed a smaller percentage of parasitemia and had less severe anemia than did other cattle in the study. The SAADA- and FAADA-**vaccinated** cattle developed a good cell-mediated immune response, but poor humoral immune response and had lower parasitemias than did challenge-exposed controls; but they developed severe anemia. It is suggested that cellular and humoral mechanisms are essential for protection in anaplasmosis. Evidence of protection from clinical anaplasmosis was not observed in SES-**vaccinated** cows.

L9 ANSWER 13 OF 19 MEDLINE on STN DUPLICATE 6
ACCESSION NUMBER: 80173514 MEDLINE
DOCUMENT NUMBER: 80173514 PubMed ID: 6768332
TITLE: Characterization of immune responses of cattle to erythrocyte stroma, Anaplasma **antigen**, and dodecanoic acid-conjugated Anaplasma **antigen** : humoral immunity.
AUTHOR: Francis D H; Buening G M; Amerault T E
SOURCE: AMERICAN JOURNAL OF VETERINARY RESEARCH, (1980 Mar) 41 (3) 362-7.
Journal code: 0375011. ISSN: 0002-9645.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English

FILE SEGMENT: Priority Journals
ENTRY MONTH: 198006
ENTRY DATE: Entered STN: 19900315
Last Updated on STN: 19900315
Entered Medline: 19800627

AB Normal erythrocyte **antigen** (sonically disrupted erythrocyte stroma; SES) and two anaplasma **antigens** (sonically disrupted anaplasma **antigen**; SAA, and French pressure cell-disrupted anaplasma **antigen**; FAA) were prepared from normal and Anaplasma marginale-infected blood. Portions of SAA and FAA **antigens** were chemically modified by conjugation with dodecanoic acid (SAADA and FAADA). Eleven cattle were **vaccinated** with SES, SAA, SAADA, or FAADA. Five weeks later, the 11 cattle, together with 3 controls, were challenge exposed with A marginale. The anti-anaplasma **antibody** response and the antierythrocyte-**antibody** response (including the blood group isoantibody response) were evaluated. Only SAA-**vaccinated** cattle developed anti-anaplasma **antibody** before challenge exposure. Isoantibodies were developed by 1 of the 3 SAADA-**vaccinated** cows and 1 of the 2 FAADA-**vaccinated** cows, as well as by all 3 SAA-**vaccinated** cows. After challenge exposure, all cattle developed anti-anaplasma **antibody** and antierythrocyte autoantibody.

L9 ANSWER 14 OF 19 EMBASE COPYRIGHT 2003 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 79230864 EMBASE
DOCUMENT NUMBER: 1979230864
TITLE: Regulatory role of suppressor T cells in the expression of delayed-type hypersensitivity in mice. I. Transient appearance of suppressor T cells for the expression of delayed footpad reaction induced with lipid-conjugated lysozyme.
AUTHOR: Kojima A.; Egashira Y.
CORPORATE SOURCE: Dept. Pathol., Nat. Inst. Hlth, Tokyo 141, Japan
SOURCE: Immunology, (1979) 37/3 (569-576).
CODEN: IMMUAM
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal
FILE SEGMENT: 026 Immunology, Serology and Transplantation
037 Drug Literature Index
LANGUAGE: English

AB Delayed footpad reaction (FPR) to lysozyme (Lys) in mice was induced without **antibody** responses by lipid-conjugated lysozyme (D.Lys). This FPR was suppressed by priming s.c. with a high dose (10 mg) of Lys 2 weeks previously (unresponsiveness). Spleen cells from the unresponsive mice suppressed **antigen**-specifically FPR in mice previously **immunized** with D.Lys, and also suppressed passive transfer of FPR by D.Lys-immune lymphoid cells into normal mice. The suppressive activity of the spleen cells was abolished by treatment with anti-θ antiserum and complement. The suppressor cells occurred also in the thymus of unresponsive mice. Unresponsiveness was induced in mice immediately after priming with Lys and persisted at least up to 7 weeks after the induction. In contrast, suppressor cells appeared only 2 weeks after induction of unresponsiveness in both the spleen and the thymus but were no longer detectable 3-7 weeks later, although donor mice remained

fully unresponsive. These results suggest that **antigen** -specific suppressor T cells are involved in the regulation of the expression of FPR only for a definite period of time in unresponsive mice.

L9 ANSWER 15 OF 19 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 7

ACCESSION NUMBER: 1978:196099 BIOSIS
DOCUMENT NUMBER: PREV197866008596; BA66:8596
TITLE: MODULATION OF IMMUNE RESPONSE PART 1 EFFECTS OF FIXATION OF HYDROPHOBIC FUNCTIONS ON AN **ANTIGEN.**
AUTHOR(S): MARET A [Reprint author]; DRACH G
CORPORATE SOURCE: CHIR HOSP UNIV PITIE-SALPETRIERE, 91 BLVD DE L'HOPITAL, 75013 PARIS, FR
SOURCE: Annales d'Immunologie (Paris), (1977) Vol. 128C, No. 4-5, pp. 863-876.
CODEN: ANIMCZ. ISSN: 0300-4910.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: FRENCH

AB Effects of fixation of hydrophobic groups on carboxylic or amine functions of a protein, bovine seralbumin (BSA), was studied with regard to the immunogenic properties of this **antigen.** B [bone marrow derived] lymphocyte responses are estimated according to the **antibody** level; T [thymus derived] lymphocyte responses are evaluated according to the intensity of the delayed-type hypersensitivity (DTH) reactions. **Immunization** by native BSA only induces synthesis of **antibodies.** No DTH is observed. BSA modified by fixation of methyl groups on carboxylic functions shows an overall positive electric charge; BSA modified by fixation of butyric groups on amine functions shows a negative charge. Contrary to native BSA and irrespective of their charges, these 2 modified proteins induce DTH. They only provoke a weak reaction of early hypersensitivity. The intensity of DTH reaction does not depend on the overall charge of the protein or on the positive or negative nature of charges at the level of antigenic sites. Reactions are provoked by introduction of hydrophobic groups on the protein. In the case of fixation on carboxylic groups, this reaction is more important and more persistant. Fixation of **lauric** chains on BSA provokes the same modifications of immunogenicity as those observed with butyric chains. The length of hydrocarbon chains is not a decisive factor for induction of DTH.

L9 ANSWER 16 OF 19 EMBASE COPYRIGHT 2003 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 77112892 EMBASE
DOCUMENT NUMBER: 1977112892
TITLE: Humoral and cellular responses to native **antigen** following oral and parenteral **immunization** with lipid conjugated bovine serum albumin.
AUTHOR: Lustig J.V.; Rieger C.H.L.; Kraft S.C.; et al.
CORPORATE SOURCE: Dept. Ped., Univ. Chicago, Ill. 60637, United States
SOURCE: Cellular Immunology, (1976) 24/1 (164-172).
CODEN: CLIMB8
DOCUMENT TYPE: Journal
FILE SEGMENT: 026 Immunology, Serology and Transplantation

LANGUAGE: English

AB Humoral and cellular immune responses of rabbits to bovine serum albumin (BSA) were measured following oral and parenteral **immunization** with either BSA or one of two dodecanoic acid conjugates of BSA. The first consisted of a mixture of lightly and heavily conjugated BSA molecules (L BSA mix), while the second (L BSA) was a homogeneous preparation of heavily conjugated BSA with more than 95% of the 60 available amino groups covalently bound to dodecanoic acid. Animals ingesting L BSA mix had a similar humoral immune response but enhanced cellular reactivity to BSA in comparison to animals ingesting the native **antigen**. No systemic immunologic responses to BSA were detected following ingestion of L BSA in spite of the demonstration of circulating BSA antigenic groups. This lack of a detectable immune response after oral administration was not due to masking of antigenic sites by the lipid residues since both humoral and cellular immune responses to BSA were obtained in animals injected with L BSA. Ingestion of L BSA did not induce tolerance since a subsequent injection of BSA elicited a normal primary immune response. The differences in immunogenicity between BSA, L BSA and L BSA mix following oral administration may be related to different modes of **antigen** recognition by the gut associated lymphoid tissues.

L9 ANSWER 17 OF 19 MEDLINE on STN DUPLICATE 8

ACCESSION NUMBER: 75153637 MEDLINE
DOCUMENT NUMBER: 75153637 PubMed ID: 165307
TITLE: **Immunization** with a lipid-conjugated membrane **antigen** to suppress growth of a fibrosarcoma induced by simian virus 40.
AUTHOR: Hunter R L; Strickland F
SOURCE: JOURNAL OF THE NATIONAL CANCER INSTITUTE, (1975 May) 54 (5) 1157-63.
Journal code: 7503089. ISSN: 0027-8874.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197508
ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19900310
Entered Medline: 19750808

AB The covalent conjugation of fatty acid to a tumor cell membrane preparation transformed it from an **antigen** that enhanced tumor growth to one that suppressed it. A crude cell membrane preparation was made by sequential hypertonic and hypotonic salt extraction of tumor cells from a fibrosarcoma induced in hamsters by simian virus 40. The membranes were chemically conjugated with dodecanoic anhydride in 0.5 M carbonate buffer (pH 9.0). Injection of unmodified membranes 10 days before transplantation of live tumor cells produced clear-cut enhancement of the tumor growth rate. In contrast, injection of lipid-conjugated membranes in a similar dose and protocol suppressed tumor growth. The lymphoid proliferative reactions to the tumor cells as demonstrated by the histology of both the tumor and regional lymph nodes were consistent with the hypothesis that unmodified membranes stimulated the production of **antibody** which participated in the enhancement of tumor growth, and that lipid-conjugated membranes stimulated the production of cell-mediated immunity which suppressed this growth.

L9 ANSWER 18 OF 19 EMBASE COPYRIGHT 2003 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 75208463 EMBASE
DOCUMENT NUMBER: 1975208463
TITLE: Studies on the composition of adjuvants which selectively enhance delayed type hypersensitivity to lipid conjugated protein **antigens**.
AUTHOR: Champlin R.; Hunter R.L.
CORPORATE SOURCE: Dept. Pathol., Univ. Chicago, Ill., United States
SOURCE: Journal of Immunology, (1975) 114/1 (I) (76-80). CODEN: JOIMA3
DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index
013 Dermatology and Venereology
026 Immunology, Serology and Transplantation
LANGUAGE: English

AB Hen egg albumin (HEA), heavily conjugated with dodecanoic acid (D HEA), stimulated sustained delayed type hypersensitivity (DTH) specific for HEA without detectable **antibody** formation in guinea pigs. An oil in water emulsion containing purified BCG cell walls attached to the oil drops was found to be a very effective adjuvant for enhancing DTH to D HEA, but not to HEA. Animals **immunized** with D HEA in the BCG cell wall emulsion produced skin test reactions 2.4 cm in diameter when challenged with HEA 21 days after a single **immunization**. Control animals **immunized** with D HEA in saline produced skin reactions 1 cm in diameter to similar challenge. Neither group of animals produced detectable **antibody** to HEA or D HEA. The emulsion had no adjuvant effect if the BCG cell walls were suspended in the aqueous phase and not attached to the oil droplets. Dodecanoic acid conjugated Salmonella typhi organisms could be used in place of the BCG cell walls to produce effective adjuvant preparations. Freund's complete adjuvant and other water in oil emulsions, however, were found to be ineffective adjuvants for enhancing the degree of DTH produced by D HEA. Experiments with autoradiography demonstrated that effective adjuvant preparations promote the localization and retention of both 125I labeled D HEA and 125I labeled BCG cell walls in the paracortical area of lymph nodes where they are in close proximity to many T type lymphocytes which proliferate in the induction of DTH.

L9 ANSWER 19 OF 19 MEDLINE on STN

ACCESSION NUMBER: 72063426 MEDLINE
DOCUMENT NUMBER: 72063426 PubMed ID: 4108376
TITLE: Immunological properties of synthetic sugar-polypeptide conjugates. Effect of N-**lauroyl**-glucosamine residues on immunogenicity.
AUTHOR: Rude E; Meyer-Delius M; Gundelach M L
SOURCE: EUROPEAN JOURNAL OF IMMUNOLOGY, (1971 Apr) 1 (2) 113-23.
Journal code: 1273201. ISSN: 0014-2980.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197202

STIC Search II

ENTRY DATE: Entered STN: 19900310
Last Updated on STN: 19900310
Entered Medline: 19720221

(FILE 'MEDLINE' ENTERED AT 15:19:37 ON 14 NOV 2003)

L10	622	SEA	FILE=MEDLINE ABB=ON	PLU=ON	"LAURIC ACIDS"/CT
L11	40137	SEA	FILE=MEDLINE ABB=ON	PLU=ON	"FATTY ACIDS"/CT
L14	6351	SEA	FILE=MEDLINE ABB=ON	PLU=ON	VACCINES/CT
L16	1	SEA	FILE=MEDLINE ABB=ON	PLU=ON	(L10 OR L11) AND L14

L10	622	SEA	FILE=MEDLINE ABB=ON	PLU=ON	"LAURIC ACIDS"/CT
L11	40137	SEA	FILE=MEDLINE ABB=ON	PLU=ON	"FATTY ACIDS"/CT
L12	48743	SEA	FILE=MEDLINE ABB=ON	PLU=ON	ANTIGENS/CT
L13	63	SEA	FILE=MEDLINE ABB=ON	PLU=ON	(L10 OR L11) AND L12
L17	60421	SEA	FILE=MEDLINE ABB=ON	PLU=ON	ANTIBODIES/CT
L18	3	SEA	FILE=MEDLINE ABB=ON	PLU=ON	L13 AND L17

L10	622	SEA	FILE=MEDLINE ABB=ON	PLU=ON	"LAURIC ACIDS"/CT
L11	40137	SEA	FILE=MEDLINE ABB=ON	PLU=ON	"FATTY ACIDS"/CT
L12	48743	SEA	FILE=MEDLINE ABB=ON	PLU=ON	ANTIGENS/CT
L13	63	SEA	FILE=MEDLINE ABB=ON	PLU=ON	(L10 OR L11) AND L12
L19	120410	SEA	FILE=MEDLINE ABB=ON	PLU=ON	PROTEINS/CT
L20	73063	SEA	FILE=MEDLINE ABB=ON	PLU=ON	PEPTIDES/CT
L21	10	SEA	FILE=MEDLINE ABB=ON	PLU=ON	L13 AND (L19 OR L20)

L22 13 L16 OR L18 OR L21

L22 ANSWER 1 OF 13 MEDLINE on STN
AN 1999260503 MEDLINE
TI Novel classes of fatty acid and retinol binding protein from nematodes.
AU McDermott L; Cooper A; Kennedy M W
SO MOLECULAR AND CELLULAR BIOCHEMISTRY, (1999 Feb) 192 (1-2) 69-75.
Ref: 41
Journal code: 0364456. ISSN: 0300-8177.
AB Parasitic nematodes have recently been found to produce proteins which represent two new classes of fatty acid and retinoid binding protein. The first is the nematode polyprotein allergens/antigens (NPAs) which, as their name suggests, are synthesised as large polyproteins which are subsequently cleaved at regularly spaced sites to form multiple copies of a fatty acid binding protein of approximately 14.5 kDa. Binding studies using molecular environment-sensitive fluorescent ligands have shown that the binding site is highly unusual, producing blue-shifting in fluorescence to an unprecedented degree, suggesting a remarkably non-polar environment and isolation from solvent water. Computer-based structural predictions and biophysical observations have identified the NPAs as highly helical proteins which might form a four helix bundle, so constitute a new class of lipid binding protein from animals. The second class, like the NPAs, binds both fatty acids and retinol, but with a higher affinity for the latter. These are also highly helical but are structurally distinct from the

NPAs. The biological function of these new classes of protein are discussed in the context of both the metabolic requirements of the parasites and the possible role of the proteins in control of the immune and inflammatory environment of the tissue sites parasitised.

L22 ANSWER 2 OF 13 MEDLINE on STN
AN 1998162648 MEDLINE
TI Detection of oxidized phospholipid-protein adducts using anti-15-hydroperoxyeicosatetraenoic acid-modified protein antibody: contribution of esterified fatty acid-protein adduct to oxidative modification of LDL.
AU Kato Y; Osawa T
SO ARCHIVES OF BIOCHEMISTRY AND BIOPHYSICS, (1998 Mar 1) 351 (1) 106-14.
Journal code: 0372430. ISSN: 0003-9861.
AB The reaction of lipid hydroperoxide with protein was investigated using an antibody, which was prepared using 15-hydroperoxyeicosatetraenoic acid (15-HPETE)-modified keyhole limpet hemocyanin as an immunogen. The obtained antibody recognized not only 15-HPETE-modified bovine serum albumin (BSA) but also 13-hydroperoxyoctadecadienoic acid (13-HPODE)-modified BSA. Glutaroyl-BSA adduct, which was prepared by the reaction of glutaric anhydride with protein, was also recognized by the antibody. The results revealed that the carboxyl terminus of lipid moiety in adducts was required for an appearance of the antigenicity. The cross-reactivity of phosphatidylcholine hydroperoxide-modified BSA (PCAOOH-BSA) with the antibody was examined. The antibody could not recognize the intact PCAOOH-BSA, whereas alkaline-treated modified BSA revealed the antigenicity. Furthermore, stearic acid at the 1 position in the phospholipid was liberated from the PCAOOH-BSA following treatment with 0.25 N NaOH. The result showed that the phospholipid moiety could be covalently bound to the protein molecule. The formation of esterified fatty acid-protein adduct during oxidation was confirmed using low-density lipoprotein (LDL). During oxidation of LDL by copper ion or 2,2'-azo-bis(2-amidinopropane)dihydrochloride, the formation of antigenic materials was observed in a time- or dose-dependent fashion. The antigenicity was significantly enhanced by the alkaline treatment on the oxidized LDL, suggesting that considerable amounts of oxidized esterified fatty acids can covalently react with apoprotein B-100 in oxidatively modified LDL.

L22 ANSWER 3 OF 13 MEDLINE on STN
AN 95152447 MEDLINE
TI Preparation method of highly-purified antibodies from antisera by using polyvinylidene difluoride membrane. Application to fatty acid binding protein in rat liver.
AU Nishino H; Ishibashi T; Nakamura H
SO BIOCHEMISTRY AND MOLECULAR BIOLOGY INTERNATIONAL, (1994 Sep) 34 (2) 409-17.
Journal code: 9306673. ISSN: 1039-9712.
AB A simple method for preparation of highly-purified antibodies from antiserum was developed by using antigen-blotted polyvinylidene difluoride transfer membrane as an affinity matrix: The antigen was purified by SDS-polyacrylamide slabgel electrophoresis. Purified antibody preparations, which had been eluted from the Gly-HCl buffer (pH 2.5)-pretreated affinity matrix, by treatment with 1,4-dioxane, were more effective to obtain specifically stained band in

immunoblot analysis than antiserum or immunoglobulin fractions purified by already reported methods. Antigen-blotted membranes were repeatedly available without remarkable release of antigen or decrease of antigenicity. This method was also applied to the examination of cross-reacting proteins with rat liver fatty acid binding protein in the cytosol fraction.

L22 ANSWER 4 OF 13 MEDLINE on STN
AN 92367355 MEDLINE
TI Soluble proteins incorporate into ISCOMs after covalent attachment of fatty acid.
AU Reid G
SO VACCINE, (1992) 10 (9) 597-602.
Journal code: 8406899. ISSN: 0264-410X.
AB The immune stimulating complex (ISCOM) is a potent adjuvant which has the ability to induce both humoral and cellular immune reactions to protein antigens when they are physically associated with the ISCOM structure. However, in general only proteins with an exposed hydrophobic domain can associate with ISCOMs. As many soluble proteins are available as candidate subunit antigens there is a requirement for a method which promotes efficient incorporation of soluble protein into ISCOMs. Here it is demonstrated that following covalent attachment of palmitic acid, two soluble proteins, cytochrome C and ovalbumin, quantitatively incorporate into ISCOMs. ISCOMs containing ovalbumin prepared in this way have been shown to be highly immunogenic, generating humoral, delayed-type hypersensitivity and class I restricted T-cell immune responses following both parenteral and oral administration. The technique of incorporating soluble proteins into ISCOMs by covalent attachment of fatty acid should be generally applicable and extends the use of the ISCOM as an adjuvant.

L22 ANSWER 5 OF 13 MEDLINE on STN
AN 82178689 MEDLINE
TI [The physiology and pathophysiology of the small intestine].
Die Physiologie und Pathophysiologie des Dunndarmes.
AU Gangl A
SO ACTA MEDICA AUSTRIACA, (1982) 9 (1) 1-7. Ref: 41
Journal code: 7501997. ISSN: 0303-8173.
AB An attempt is made in this review, to highlight recent concepts in the physiology and pathophysiology of intestinal absorption, to recollect the multiplicity of functions of the small intestine in the cellular and humoral immune response and to draw attention to the numerous endocrine and paracrine cells, residing in the intestinal mucosa, which produce peptides of mostly well defined biochemistry, the physiological and especially pathophysiological role of which, however, is still uncertain.

L22 ANSWER 6 OF 13 MEDLINE on STN
AN 75096175 MEDLINE
TI Studies on the composition of adjuvants which selectively enhance delayed-type hypersensitivity to lipid conjugated protein antigens.
AU Champlin R; Hunter R L
SO JOURNAL OF IMMUNOLOGY, (1975 Jan) 114 (1 Pt 1) 76-80.
Journal code: 2985117R. ISSN: 0022-1767.
AB Hen egg albumin (HEA), heavily conjugated with dodecanoic acid (D-HEA), stimulated sustained delayed type hypersensitivity (DTH) specific for HEA without detectable antibody formation in guinea

pigs. An oil-in-water emulsion containing purified BCG cell walls attached to the oil drops was found to be a very effective adjuvant for enhancing DTH to D-HEA, but not to HEA. Animals immunized with D-HEA in the BCG cell wall emulsion produced skin test reactions 2.4 cm in diameter when challenged with HEA 21 days after a single immunization. Control animals immunized with D-HEA in saline produced skin reactions 1 cm in diameter to similar challenge. Neither group of animals produced detectable antibody to HEA-OR D-HEAmThe emulsion had no adjuvant effect if the BCG cell walls were suspended in the aqueous phase and not attached to the oil droplets. Dodecanoic acid conjugated Salmonella typhi organisms could be used in place of the BCG cell walls to produce effective adjuvant preparations. Fruend's complete adjuvant and other water-in-oil emulsions, however, were found to be ineffective adjuvants for enhancing the degree of DTH produced by D-HEA. Experiments with autoradiography demonstrated that effective adjuvant preparations promote the localization and retention of both 125-I-labeled D-HEA and 125-I-labeled BCG cell walls in the paracortical area of lymph nodes where they are in close proximity to many T-type lymphocytes which proliferate in the induction of DTH.

L22 ANSWER 7 OF 13 MEDLINE on STN
AN 72007303 MEDLINE
TI Synthesis and degradation of malic enzyme in chick liver.
AU Silpananta P; Goodridge A G
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1971 Sep 25) 246 (18) 5754-61.
Journal code: 2985121R. ISSN: 0021-9258.

L22 ANSWER 8 OF 13 MEDLINE on STN
AN 71252015 MEDLINE
TI Studies on a protein isolated from livers of diabetic and fasted rats.
AU Collins J M; Craig M C; Nepokroeff C M; Kennan A L; Porter J W
SO ARCHIVES OF BIOCHEMISTRY AND BIOPHYSICS, (1971 Apr) 143 (2) 343-53.
Journal code: 0372430. ISSN: 0003-9861.

L22 ANSWER 9 OF 13 MEDLINE on STN
AN 70092138 MEDLINE
TI The antigen involved in immune adherence with stratum corneum and human serum.
AU Krogh H K
SO INTERNATIONAL ARCHIVES OF ALLERGY AND APPLIED IMMUNOLOGY, (1970) 38 (1) 78-92.
Journal code: 0404561. ISSN: 0020-5915.

L22 ANSWER 10 OF 13 MEDLINE on STN
AN 69267422 MEDLINE
TI [Species specific polysaccharide-rich cell membrane antigens of Dictyostelium discoideum].
Artspezifitat Polysaccharid-haltiger Zellmembran-Antigene von Dictyostelium discoideum.
AU Gerisch G; Malchod; Wilhelms H; Luderitz O
SO EUROPEAN JOURNAL OF BIOCHEMISTRY, (1969 Jun) 9 (2) 229-36.
Journal code: 0107600. ISSN: 0014-2956.

L22 ANSWER 11 OF 13 MEDLINE on STN
AN 69253142 MEDLINE
TI Immunochemical studies on tobacco mosaic virus protein. IX.

Investigations on binding and antigenic specificity of antibodies to an antigenic area of tobacco mosaic virus protein.
AU Benjamini E; Shimizu M; Young J D; Leung C Y
SO BIOCHEMISTRY, (1969 Jun) 8 (6) 2242-6.
Journal code: 0370623. ISSN: 0006-2960.

L22 ANSWER 12 OF 13 MEDLINE on STN
AN 69137593 MEDLINE
TI Cellular membrane alterations in neoplasia: a review and a unifying hypothesis.
AU Wallach D F
SO CURRENT TOPICS IN MICROBIOLOGY AND IMMUNOLOGY, (1969) 47 152-76.
Ref: 189
Journal code: 0110513. ISSN: 0070-217X.

L22 ANSWER 13 OF 13 MEDLINE on STN
AN 69065634 MEDLINE
TI Participation of the microsomal electron transport system involving cytochrome P-450 in omega-oxidation of fatty acids.
AU Wada F; Shibata H; Goto M; Sakamoto Y
SO BIOCHIMICA ET BIOPHYSICA ACTA, (1968 Nov 26) 162 (4) 518-24.
Journal code: 0217513. ISSN: 0006-3002.

FILE 'HCAPLUS' ENTERED AT 15:25:50 ON 14 NOV 2003
L1 1 SEA FILE=REGISTRY ABB=ON PLU=ON "LAURIC ACID"/CN
L3 29344 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 OR LAUROYL OR LAURIC OR (C8(1W)(C18 OR 18))(S)(FATTY(W)(ACID OR ACYL))
L5 122 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 AND ANTIGEN
L6 43 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 AND (VACCIN? OR IMMUNIS? OR IMMUNIZ?)
L23 19 SEA FILE=HCAPLUS ABB=ON PLU=ON L6 AND (PEPTIDE OR PROTEIN OR POLYPEPTIDE OR POLYPROTEIN)

L24 8 S L23 NOT L7

L24 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:906994 HCAPLUS
DOCUMENT NUMBER: 138:3665
TITLE: Chiral diamide and glycerol diamide compounds for use as immune adjuvant in **vaccine** compositions
INVENTOR(S): Hawkins, Lynn D.; Ishizaka, Sally T.; Lewis, Michael; McGuinness, Pamela; Rose, Jeffrey
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 176 pp., Cont.-in-part of U. S. Ser. No. 496,152.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002176861	A1	20021128	US 2001-918849	20010731
US 6551600	B2	20030422		
US 6290973	B1	20010918	US 2000-496152	20000201

WO 2003011223 A2 20030213 WO 2002-US24258 20020731
WO 2003011223 A3 20030501
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
US 2003153532 A1 20030814 US 2002-208936 20020731
PRIORITY APPLN. INFO.: US 1999-118131P P 19990201
US 2000-496152 A2 20000201
US 2001-918849 A 20010731

OTHER SOURCE(S): MARPAT 138:3665

AB The present invention is directed to novel compds. that function as immunol. adjuvants when co-administered with **antigens** such as **vaccines** for bacterial and viral diseases, to novel adjuvant formulations which include at least one of the adjuvant compds. of the invention, to novel immunostimulatory compns. which comprise an **antigen** and at least one of the adjuvant compds. of the invention, and to methods for the **immunization** of an animal by co-administration of a compound of the invention with an **antigen** against which the animal is to be **immunized.** The immune adjuvant compds are diamide compds, chiral diamide compds, or glycerol diamide analogs. The **antigen** is e.g. influenza X-31 **antigen** or meningococcal C polysaccharide.

L24 ANSWER 2 OF 8 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:813867 HCAPLUS
DOCUMENT NUMBER: 137:293554
TITLE: Anti-inflammatory fatty alcohols and fatty acid esters useful as **antigen** carriers
INVENTOR(S): Cohen, Irun R.; Shinitzky, Meir; Margalit, Raanan
PATENT ASSIGNEE(S): Yeda Research and Development Co., Ltd., Israel
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002083058	A2	20021024	WO 2002-IL295	20020411

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE,

CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: IL 2001-142536 A 20010411

AB Therapeutic prepns. are provided for treatment of a T-cell mediated disease or condition comprising an **antigen** and a carrier, wherein said **antigen** is an **antigen** recognized by inflammatory T cells associated with the pathogenesis of said T-cell mediated disease or condition, and wherein said carrier is an anti-inflammatory immunomodulator selected from: (a) a saturated or cis-unsatd. C10-C20 fatty alc. or an ester thereof with a C1-C6 alkanoic acid; and (b) a saturated or cis-unsatd. C10-C20 fatty acid ester selected from a C1-C6 alkyl ester, a monoester with a C2-C6 polyol having a least two hydroxy groups, and a diester with glycerol. The fatty alcs. and fatty acid esters shift the T-cell cytokine response in the patient from Th1 to Th2. The T-cell mediated disease is an autoimmune disease such as type I diabetes, multiple sclerosis, rheumatoid arthritis, and autoimmune thyroiditis.

IT **143-07-7D, Lauric** acid, esters
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(anti-inflammatory fatty alcs. and fatty acid esters useful as **antigen** carriers in treatment of autoimmune diseases)

L24 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:645881 HCAPLUS
DOCUMENT NUMBER: 133:251263
TITLE: Compositions and methods for treating cancer and hyperproliferative disorders
INVENTOR(S): Holaday, John W.; Ruiz, Antonio; Madsen, John
PATENT ASSIGNEE(S): Entremed, Inc., USA
SOURCE: PCT Int. Appl., 95 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000053219	A2	20000914	WO 2000-US6320	20000310
WO 2000053219	A3	20010125		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1156824	A2	20011128	EP 2000-912209	20000310
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002538219	T2	20021112	JP 2000-603708	20000310

PRIORITY APPLN. INFO.: US 1999-266543 A 19990311

WO 2000-US6320 W 20000310

AB Compns. and methods effective for eliciting an immune response for inhibiting abnormal or undesirable cell proliferation, particularly endothelial cell proliferation and angiogenesis related to neovascularization and tumor growth are provided. The compns. comprise a naturally occurring or synthetic **protein**, **peptide**, or **protein** fragment containing all or an active portion of a growth factor in a pharmaceutically acceptable carrier. The preferred growth factors comprise basic fibroblast growth factor and vascular endothelial growth factor. The methods involve administering to a human or animal the compns. described herein in a dosage sufficient to elicit an immune response. The methods are useful for treating diseases and processes mediated by undesired and uncontrolled cell proliferation, such as cancer, particularly where uncontrolled cell proliferation is influenced by the presence of growth factors. Administration of the composition to a human or animal having metastasized tumors is useful for preventing the growth or expansion of such tumors.

IT **143-07-7**, **Lauric** acid, biological studies
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(immunogenic compns. containing animal growth factor fragment for treating cancer and hyperproliferative disorders)

L24 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:433344 HCAPLUS
DOCUMENT NUMBER: 133:79341
TITLE: Immunostimulating and **vaccine** compositions employing saponin analog adjuvants and uses thereof
INVENTOR(S): Marciani, Dante J.
PATENT ASSIGNEE(S): Galenica Pharmaceuticals, Inc., USA
SOURCE: U.S., 40 pp., Cont.-in-part of U.S. 5,977,081.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6080725	A	20000627	US 1999-290606	19990413
US 5977081	A	19991102	US 1998-81647	19980520

PRIORITY APPLN. INFO.: US 1997-47129P P 19970520
US 1998-80389P P 19980402
US 1998-81647 A2 19980520

OTHER SOURCE(S): MARPAT 133:79341

AB The present invention is directed to **vaccines** comprising (1) one or more bacterial, viral or tumor-associated **antigens**; and (2) one or more saponin-lipophile conjugate in which a lipophilic moiety such as a lipid, fatty acid, polyethylene glycol or terpene is covalently attached to a non-acylated or desacylated triterpene saponin via a carboxyl group present on the 3-O-glucuronic acid of the triterpene saponin. The attachment of a lipophile moiety to the 3-O-glucuronic acid of a saponin such as Quillaja desacylsaponin, lucyoside P, or saponin from Gypsophila, Saponaria and Acanthophyllum enhances their adjuvant effects on humoral and cell-mediated immunity. Addnl., the attachment of a

lipophile moiety to the 3-O-glucuronic acid residue of non- or des-acylsaponin yields a saponin analog that is easier to purify, less toxic, chemical more stable, and possesses equal or better adjuvant properties than the original saponin.

IT **143-07-7D, Lauric** acid, saponin conjugates
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(immunostimulating and **vaccine** compns. employing saponin analog adjuvants and uses thereof)

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2000:314848 HCAPLUS
DOCUMENT NUMBER: 132:346615
TITLE: Recombinant Gram-negative bacteria-produced lipopolysaccharides with reduced toxicity for use as **vaccine** adjuvants
INVENTOR(S): Van der Ley, Peter Andre; Hamstra, Hendrik Jan; Steeghs, Liana Juliana Josephine Margriet
PATENT ASSIGNEE(S): De Staat Der Nederlanden, Vertegenwoordigd Door De Minister Van Welzijn, Vol, Neth.
SOURCE: PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000026384	A1	20000511	WO 1998-NL633	19981103
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9911782	A1	20000522	AU 1999-11782	19981103
AU 762369	B2	20030626		
EP 1127137	A1	20010829	EP 1998-954832	19981103
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
JP 2002528558	T2	20020903	JP 2000-579756	19981103
NZ 511438	A	20030328	NZ 1998-511438	19981103
US 6482807	B1	20021119	US 2001-830910	20010702

PRIORITY APPLN. INFO.: WO 1998-NL633 A 19981103

AB Recombinant lipopolysaccharides (LPS) with reduced toxicity yet retaining antigenicity that can be used as adjuvants are provided. Recombinant LPS having a reduced number of secondary acyl chains per mol. of LPS vis-a-vis the corresponding non-modified LPS mol., said secondary acyl chains being bound to primary acyl chains, said

primary acyl chains being bound to the glucosamine of said recombinant LPS mol., said recombinant LPS being homogeneous in acylation pattern, is specifically provided. Also recombinant LPS having a phosphate group attached to the glucosamine at the non reducing end of the LPS mol. and a phosphate group attached to the glucosamine at the reducing end of the mol. per recombinant LPS mol. provides a further example. The recombinant LPS may further contain a phosphoethanolamine group. These recombinant LPS are derived from the LPS of Gram neg. bacteria of genus Neisseria, Bordetella, Salmonella, or Haemophilus, preferably Neisseria meningitidis. Also claimed is a method of producing such recombinant LPS via culturing a Gram neg. bacterium harboring a mutation in a gene coding for an enzyme associated with secondary acyl, preferably **lauroyl**, addition to primary acyl chain at the reducing end of the LPS, preferably at the 2' position of the glucosamine. The gene is preferably the htrB1 gene. A **vaccine** for stimulating immune response against a Gram neg. bacterium containing the recombinant LPS as adjuvant and an **antigen** is also claimed. LPS from Neisseria meningitidis with mutation in htrB1 gene contained alterations in lipid A, notably a partial loss of the secondary C12:0 acyl chains and alteration in the phosphorylation pattern at the reducing end. The htrB1 mutant LPS had a significantly reduced toxicity while retaining adjuvant activity.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:180574 HCAPLUS
DOCUMENT NUMBER: 128:229355
TITLE: Immuno-potentiating systems for preparation of immunogenic materials
INVENTOR(S): Lowell, George H.
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 16 pp., Cont.-in-part of U.S. Ser. No. 29,666, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5726292	A	19980310	US 1993-143365	19931029
US 2003026807	A1	20030206	US 1997-982965	19971202

PRIORITY APPLN. INFO.:
US 1987-65440 B1 19870623
US 1989-336952 B2 19890412
US 1991-642093 B2 19910116
US 1993-29666 B2 19930311
US 1993-143365 A3 19931029

AB The invention is directed to improved immunopotentiating systems for preparation of immunogenic materials. More particularly, the invention is directed to immunogenic compns. containing a **protein**, **polypeptide**, or **peptide**, a hydrophobic anchor, and a proteasome. The immunogenic compns. are suitable for use as therapeutic agents and **vaccines**. The **vaccine** is useful for treating infectious diseases, malignancies and toxic

effects of chems. and biologicals. Thus, the method was used for preparing gp160 as AIDS **vaccine**, gp63 as Leishmania **vaccine**, and Staphylococcal enterotoxin B for inducing anti-SEB IgA and IgG.

IT **143-07-7**, **Lauric** acid, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**vaccine** composition containing cyclic cysteine introduction and hydrophobic anchor and proteasome for potentiating immunogenicity of **antigen**)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1994:320964 HCAPLUS
DOCUMENT NUMBER: 120:320964
TITLE: Phospholipid composition of r-DNA hepatitis B surface **antigens**
AUTHOR(S): Van der Meeren, Paul; Van Criekinge, Wim; Vanderdeelen, Jan; Baert, Leon
CORPORATE SOURCE: Fac. Agric., Univ. Ghent, Ghent, B-9000, Belg.
SOURCE: International Journal of Pharmaceutics (1994), 106(1), 89-92
CODEN: IJPHDE; ISSN: 0378-5173
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The composition of the lipid matrix of the antigenic **protein** of r-DNA hepatitis B surface **antigen** (HBsAg) particles was investigated. HPLC revealed that the lipid fraction contained mainly neutral lipids, as well as phosphatidylcholine, phosphatidylinositol and phosphatidylethanolamine. In addition, it was shown that these lipids contained primarily C16 and C18 saturated and mono-unsatd. fatty acids. Comparing these results to literature data concerning blood plasma HBsAg particles, significant differences were observed

IT **143-07-7D**, C12:0, phospholipids containing, biological studies
RL: BIOL (Biological study)
(of recombinant surface **antigen** of hepatitis B virus, **vaccine** in relation to)

L24 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1987:194539 HCAPLUS
DOCUMENT NUMBER: 106:194539
TITLE: Immunospecific T-lymphocyte stimulation by membrane **proteins** from Francisella tularensis
AUTHOR(S): Sandstroem, G.; Taernvik, A.; Wolf-Watz, H.
CORPORATE SOURCE: Natl. Def. Res. Inst., Umea, S-901 82, Swed.
SOURCE: Journal of Clinical Microbiology (1987), 25(4), 641-4
CODEN: JCMIDW; ISSN: 0095-1137
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Membranes from a capsule-deficient mutant of the live-**vaccine** strain of F. tularensis, LVS, were treated with N-**lauroyl** sarcosinate (Sarkosyl). When the Sarkosyl-insol. fraction was heated in the presence of SDS and mercaptoethanol and subjected to SDS-PAGE, several **polypeptides** were

distinguished. Four major **polypeptides** were eluted from the gel, each of which stimulated lymphocytes from tularemia-**vaccinated** individuals but not from nonvaccinated individuals. The stimulation occurred mainly in T lymphocytes. Radioactive labeling of surface **proteins** of the capsule-deficient bacteria indicated that at least 2 of the 4 **polypeptides** originated from outer membrane **proteins** . The results suggest that several membrane **proteins** of F. tularensis LVS induce a specific T-lymphocyte response.

(FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, JAPIO' ENTERED AT 15:27:41 ON 14 NOV 2003)

L25 22 S L23
L26 4 S L25 NOT L8
L27 4 DUP REM L26 (0 DUPLICATES REMOVED)

L27 ANSWER 1 OF 4 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
ACCESSION NUMBER: 2003-092955 [08] WPIDS
DOC. NO. CPI: C2003-023202
TITLE: A composition comprising an anti-inflammatory immunomodulator as a carrier in combination with an **antigen**, useful for treatment of T-cell mediated diseases e.g. type I diabetes.
DERWENT CLASS: B04 B05 D16
INVENTOR(S): COHEN, I R; MARGALIT, R; SHINITZKY, M
PATENT ASSIGNEE(S): (YEDA) YEDA RES & DEV CO LTD
COUNTRY COUNT: 100
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002083058	A2	20021024	(200308)*	EN	28

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002083058	A2	WO 2002-IL295	20020411

PRIORITY APPLN. INFO: IL 2001-142536 20010411
AN 2003-092955 [08] WPIDS
AB WO 200283058 A UPAB: 20030204
NOVELTY - A therapeutic preparation comprising an **antigen** (recognizable by inflammatory T-cells associated with pathogenesis) and a carrier (an anti-inflammatory immunomodulator), is new.
DETAILED DESCRIPTION - A therapeutic preparation comprising an **antigen** (recognizable by inflammatory T-cells associated with pathogenesis) and a carrier (an anti-inflammatory immunomodulator selected from a saturated or cis-unsaturated 10-20C fatty alcohol (a) or its ester with a 1-6C alkanoic acid; a

saturated or cis-unsaturated 10-20C fatty acid ester (b) selected from 1-6C alkyl ester, a monoester with 2-6C polyol (having at least two hydroxy groups) and a diester with glycerol), is new.

ACTIVITY - Antidiabetic; Neuroprotective; Antirheumatic; Antiarthritic; Antithyroid; Immunosuppressive.

MECHANISM OF ACTION - Inflammation inhibitor; anti-inflammatory immunomodulator.

Lewis rats were **immunized** with adjuvant arthritis. The rats were administered subcutaneously with oleyl alcohol (100 micro L) and showed inflammation inhibition of 78 - 96%.

USE - For treatment of T-cell mediated disease (preferably an organ-specific autoimmune disease selected from type I diabetes, multiple sclerosis, rheumatoid arthritis and autoimmune thyroiditis) (claimed). As a therapeutic **vaccine** for induction of activation of specific T cells of the desired anti-inflammatory phenotype.

ADVANTAGE - The preparation:

(a) shifts an individual's T-cell cytokine response from TH1 to TH2;

(b) decreases IL-2 and/or IFN- gamma T-cell cytokine; and

(c) increases IL-4 and/or IL-10 T-cell cytokine response.

The carrier effectively activates T-cells, and is used any time to create tolerance for the **antigen** which the T cells are attacking i.e. any time that a **vaccine** is used to restrict a T-cell mediated condition, preferably a TH1-cell mediated condition.

Dwg.0/1

L27 ANSWER 2 OF 4 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN

ACCESSION NUMBER: 2001-408765 [43] WPIDS
DOC. NO. CPI: C2001-123801
TITLE: Component for an adjuvant capable of miscelle formation, for use in a **vaccine**, comprises a **peptide** head group and a lipophilic tail group.
DERWENT CLASS: B04 D16
INVENTOR(S): RAMESH, B S; ZUCKERMAN, J N
PATENT ASSIGNEE(S): (UNLO) UNIV COLLEGE LONDON
COUNTRY COUNT: 21
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001047553	A1	20010705	(200143)*	EN	19

RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
W: JP US

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001047553	A1	WO 2000-GB4937	20001221

PRIORITY APPLN. INFO: GB 1999-30591 19991223
AN 2001-408765 [43] WPIDS
AB WO 200147553 A UPAB: 20010801
NOVELTY - A component (I) for an adjuvant capable of miscelle

formation, comprising a **peptide** head group for binding to an **antigen**-presenting cell, and a lipophilic tail group.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) an adjuvant comprising a micelle comprising more than one (I); and

(2) a **vaccine** composition comprising an **antigen** and (1).

ACTIVITY - Immunostimulant. No suitable biological data is given.

MECHANISM OF ACTION - **Vaccine.**

USE - (I) is used in an adjuvant, which is capable of miscelle formation, for a **vaccine** (claimed).

ADVANTAGE - (I) can be used in an adjuvant which does not produce granulomas at injection sites, unlike Freund's adjuvants. The new adjuvant can bind to specific cells as it has miscelle-forming properties. It can elicit a T-cell mediated immune response. There is no size restriction on particle size.

Dwg.0/0

L27 ANSWER 3 OF 4 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN

ACCESSION NUMBER: 1989-222073 [31] WPIDS
DOC. NO. CPI: C1989-098623
TITLE: Immunogenic complex containing **peptide**(s) - with attached hydrophobic tail for adsorption to hepatitis B virus surface **antigen.**
DERWENT CLASS: B04
INVENTOR(S): NEURATH, A R
PATENT ASSIGNEE(S): (NYBL-N) NY BLOOD CENTER INC
COUNTRY COUNT: 12
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 326109	A	19890802	(198931)*	EN	16
R: BE CH DE ES FR GB IT LI NL SE					
US 5039522	A	19910813	(199135)		
EP 326109	B1	19930623	(199325)	EN	18
R: BE CH DE ES FR GB IT LI NL SE					
DE 68907225	E	19930729	(199331)		
CA 1333358	C	19941206	(199504)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 326109	A	EP 1989-101280	19890125
US 5039522	A	US 1988-149789	19880129
EP 326109	B1	EP 1989-101280	19890125
DE 68907225	E	DE 1989-607225	19890125
		EP 1989-101280	19890125
CA 1333358	C	CA 1989-589388	19890127

FILING DETAILS:

PATENT NO	KIND		PATENT NO
DE 68907225	E	Based on	EP 326109

PRIORITY APPLN. INFO: US 1988-149789 19880129
AN 1989-222073 [31] WPIDS
AB EP 326109 A UPAB: 19930923
An immunogenic complex is claimed comprising a **peptide** containing a hydrophobic tail, the **peptide** being adsorbed to hepatitis B virus surface **antigen** (HBsAg) via the hydrophobic tail.

The hydrophobic tail may be covalently linked to the **peptide** by (a) reacting the **peptide** containing one or more cysteine residues with a long chain aliphatic mercaptan of formula CnH(2n + 1)SH or CnH(2n + 1)COSH (n=7-30) or (b) reacting an alpha-amino gp. of the **peptide** with a 7-30C aldehyde or 7-30C acid anhydride; the aldehyde may be e.g. myristyl aldehyde, lauraldehyde or decyl aldehyde and the acid anhydride may be e.g. **lauric** acid anhydride, myristic acid anhydride, stearic acid anhydride or palmitic acid anhydride.

USE/ADVANTAGE - The addition of **peptides** to HBsAg particles increases the immunogenicity and the prods. can be used as **vaccines**. The method may be used for **peptides** such HIV and hepatitis B virus **peptides**, especially hepatitis B virus pre S **peptide**.
0/5
ABEQ US 5039522 A UPAB: 19930923
Immunogenic complexes (I) comprise a **peptide** attached to a hydrophobic tail. The **peptide** is absorbed on to particles comprising intact hepatitis B virus surface **antigen** via the hydrophobia tail.

The **peptide** is pref. a hepatitis B virus preS **peptide**. Pref. the hydrophobic tail is covalently linked to the **peptide** (which contains one or more cysteine residues) by reaction with a long chain, aliphatic mercaptan of formula CnH2n+1SH or CnH2n+2COSH, where n = 7-30.

USE - As a **vaccine** when administered with a physiologically acceptable diluent and an adjuvant.
ABEQ EP 326109 B UPAB: 19931116
An immunogenic complex comprising a **peptide** containing a hydrophobic tail, said **peptide** being adsorbed to hepatitis B virus surface **antigen** via said hydrophobic tail.
Dwg.0/5

L27 ANSWER 4 OF 4 MEDLINE on STN
ACCESSION NUMBER: 81087924 MEDLINE
DOCUMENT NUMBER: 81087924 PubMed ID: 6778599
TITLE: Immunogenic properties of soluble **antigens** or whole cells of Brucella abortus strain 45/20 associated with immunoadjuvants. I. Soluble **antigens**.
AUTHOR: Woodard L F; Toone N M; McLaughlin C A
SOURCE: CANADIAN JOURNAL OF COMPARATIVE MEDICINE, (1980 Oct) 44 (4) 453-5.
Journal code: 0151747. ISSN: 0008-4050.
PUB. COUNTRY: Canada
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198103
ENTRY DATE: Entered STN: 19900316

Last Updated on STN: 19900316
Entered Medline: 19810327

AB A purified **protein** derivative-live preparation of Brucella abortus strain 45/20 was tested for immunogenic properties either alone, after lipid conjugation, or in association with defined adjuvants. The adjuvants were trehalose dimycolate (cord factor), isolated from wax D of mycobacteria and murmyl dipeptide (N-acetyl-muramyl-L-alamyl-D-isoglutamine), a synthetic glycopeptide analog of peptidoglycan subunits found in many bacterial cell walls and wax D of mycobacteria. Guinea pigs were intradermally inoculated with a single injection of the **vaccine** preparations eight weeks before intramuscular challenge with B. abortus, strain 2308. None of the purified **protein** derivative-like preparations were as effective in the prevention of splenic infections with B. abortus as were killed whole cells of strain 45/20 in Freund's complete adjuvant. Whole cells in Freund's complete adjuvant were able to reduce mean colony counts by 97% (P = 0.02), while purified **protein** derivative-like **vaccines** were able to reduce mean colony counts by only 32 to 61% as compared to control animals. Results suggest that purified **protein** derivative-like preparations have limited immunogenic properties under present test conditions.

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